

List of VM Consolidated documents of Dr. S. K. Kapoor

List 4 Manuscript – 1 3-Space VMS AND T

VM BOOK
3-SPACE VMS & T

1. CLASS-9 FILE-1 Annexure Coneptual statement 001 to 300

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3-space VMS & T

Folder name D-01 14-May-2015 Books to be published

Sub folder name D-01.1 VMS & T

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*

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*Vedic mathematics, Science &
Technology Textbook*

Class IX

(3-space)

VMS & T Textbook of 3-space

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Second Semester

Steps for Intelligence

Growth On the format of

Ganita Sutras 35-55

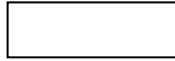
About Second Semester course

1. During first semester course, we have learnt lessons 1 to 7:
 Lesson 1 Cube
 Lesson 2 Geometric envelope of Cube
 Lesson 3 Seven versions of Cube
 Lesson 4 Eight octants cut of 3-Space
 Lesson 5 Nine Points fixation of a Cube
 Lesson 6 Vyasthi Smasthi
 Lesson-7 Hyper cube 3 format
2. The focus during first semester, as lesson 1 to 5 has been upon the set up of cube and its glaring features of its geometric envelope, 7 versions, 8 octants and 9 fixation point.
3. Sixth lesson (Vyasthi Smasthi) adds insight about the organization format and working rule of Ganita Sutra 11. Here feature of permissibility of the set up of cube within cube has been focused in the background of this feature, attention has been drawn to the concept of measuring rods of hyper cubes in general and especially of hyper cubes 1 to 7 and specifically about the measuring rod of 3-space.
4. Lesson 7 Hyper cube 3 format, is in a way the sum up of the values of the course leading to the set up of cube being of the format of hyper cube 3.
5. The format of hyper cube in its generality, is of four folds manifestation layers features designated as 'dimension fold, boundary fold, domain fold and origin fold.
6. Further focus of this course has been that space contents of consecutive four dimensional spaces manifests simultaneously.
7. In case of cube / hyper cube 3, 3-space content lump manifests as domain fold (volume) enveloped within the geometric envelope

constituted by space contents of triple spaces, namely (0-space, 1-space and 2-space) which together synthesized geometric envelope for 3-space domain.

8. The glaring feature of this set up is that center of the cube is a seat of hyper cube 4 domain, origin of three dimensional frame as well is of the format and features of 4-space at point value, i.e. at dimension of dimension level of 4-space.
9. Another glaring feature of this set up is that there manifest cube within cube and the measuring rod of 3-space domain with the synthetic set of hyper cube 1, 2 and 3.

*

VMS & T

1. Vedic mathematics, Science & Technology (VMS & T) is an Ancient Wisdom Discipline.
2. VMS & T is an wholesome Discipline while Mathematics, Sciences and Technologies are individualistic Disciplines
3. Mathematics covers dimensional spaces.
4. Sciences cover space contents and technologies cover space contents.
5. VMS & T covers the wholeness of Existence Phenomenon of dimensional space.
6. Vedic Systems work out Existence Phenomenon along manifestation formats as an integrated Phenomenon of 'Triloki and Trimurti'.
7. Triloki and Trimurti Phenomenon is of phases and stages being designated as (i) vishwa (Triloki) and (ii) (a) Lord Brahma, (b) Lord Shiv and (c) Lord Vishnu (Trimurti)
8. Formats and features of these four phases are parallel to the format and features of 3-space, 4-space, 5-space and 6-space respectively.
9. In this background, VMS & T course for High and Higher secondary classes is a sequential organization along formats representative regular bodies of 3, 4, 5 and 6 space respectively.
10. The focus of VMS & T course during class IX is to remain the format of hyper cube-3 , while the focus of class 10 is to be upon the format of hyper cube 4 and focus of class 11 and class 12 is to be upon the formats of hyper cube 5 and hyper cube 6 respect respectively

3-space VMS & T

3-space Mathematics

11. 3-space is a linear order space. as such, 3-space Mathematics is the Mathematics of linear units i.e. (1 as 1).

3-space Sciences & Technologies

12. Sciences of 3-space work out 3-space matter
13. Technologies of 3-space deal with 3-space bodies.

3-space VMS & T

14. VMS & T of 3-space phases chases Existence Phenomenon along the format of hyper cube 3, a four fold manifestation layer of line (1-space in the role of dimension, 2-space in the role of boundary, 3-space as domain and 4-space in origin.
15. The features and values of this format manifests as set up of cube
16. Of this format, the transcendence permissibility at the origin fold is of special significance as in terms of it the transition form the existing phase to the next phase of hyper cube 4 format is a reach;

17. With the focus of 3-space VMS & T phase of Existence Phenomenon attaining transition for the next phase and stage of Existence Phenomenon, makes this attainment as the End values of 3-space VMS & T.

Cube as hyper cub-3

18. In the light of the above, it can be said that the focus of learning during present year course of VMS & T would be upon 'cube as hyper cube 3'.

Vishwa Rupa (विश्व रूपः)

19. Features and format of Vishwa Rupa are described as a three head person with one eye in each head and 6 arms.
20. These formats and features of Vishwa Rupa are parallel to features and formats of cube / hyper cube 3 as that parallel to three heads are three dimensions.
21. Further parallel to one eye in each head is linear dimensional order (linear axis) of three dimensional frame.
22. Still further, parallel to 6 arms are six surface plates / six components of spatial boundary of cube / 3-space.
23. One heart and parallel to it center of cube / origin of 3-space being the seat of creator (presiding deity of 4-space), brings to focus a fourth fold (origin fold) of hyper cube 3 format.

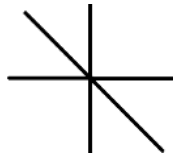
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LESSON – 01

CUBE (📐)

Overview of lesson

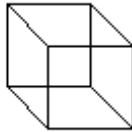
1. This is the first lesson. It introduces 'cube', as the representative regular body of 3-space.
2. It may be accepted by way of definition that the representative regular body of 3-space has equal preference for each of the three dimensions. No dimension (axis) is preferred over any other dimension (axis).
3. One axis is taken as accepting length as unit for measurement. The pair of axes may be taken as accepting area unit for measurement. All the three axes to be taken as accepting volume unit for measurement.
4. Three linear axes and their sole common meeting point constitute / construct a three dimensional frame of linear axes



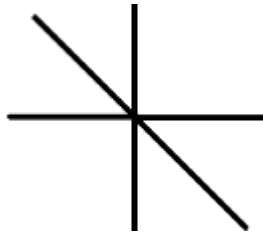
5. It may be taken by way of definition that the common meeting point of three axes is the origin of three dimensional frame. And that each axis splits into a pair of half axes joined at the origin.
6. Points, Lines, Surfaces and Solids are four distinct geometric bodies of distinct features.
7. The focus while visiting the set up of the cube, representative regular body of 3-space should be as to how these quadruple geometric bodies namely Points, Lines, Surfaces and Solids are marking their presence in the set up of cube.
8. Also the center of the cube be visited with focused attention being part of volume of cube, as well as being the seat of origin of three dimensional frame. *

Text of Lesson

1. Cube (⊠) is the representative regular body of 3-space.



2. Representative regular body is one which does not distinguish / prefer one dimension over another dimension.
3. 3-space accepts three linear dimension frame for its bodies



4. Linear dimension accepts 'length' as a 'unit'; pair of linear dimensions (designated as length unit and breadth unit respectively) accept 'area' as a unit, and all the three dimensions (designated as a length unit, breadth unit and height unit respectively) accept as 'volumme unit'.
5. The common point (joint) of three dimensions (of length, breadth and height units) is designated as origin of a three dimensional frame of linear dimensions.
6. Centre of cube (⊠) super imposes upon origin of three dimensional frame.
7. The set up of 'cube' with its centre super imposed upon the origin of a three dimensional frame and each dimension coordinates the centres of a pair of parallel surface plates of cube makes complete set up of regular body of 3-space.
8. The complete set up of cube (⊠) as such makes out a set of 31 geometric components, namely
 - (i) 8 corner points of cube (⊠)

- (ii) 12 edges of cube (8)
 - (iii) 6 surfaces of cube (8)
 - (iv) 1 volume of cube (8)
 - (v) 3 dimensions of 3 dimensional frame
- Total $8 + 12 + 6 + 1 + 3 + 1 = 31$ structural (geometric) components

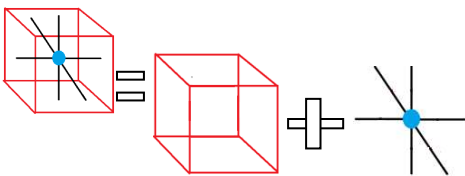
Exercises

- I. Define and tabulate different conceptual of technical terms of lesson

Hint :

Cube (8), representative regular body, 3-space, dimension, origin, dimensional frame, corner point, edge, surface, volume & centre of cube, length, breadth & height units, length area and volume units, complete set up of cube, structural geometric components, etc.

- II. Visit and revisit the following :



Note :-

The designations / formulations 'cube' and 'घनः' permit chase in terms of number values formats in terms of numbers range '1 to 26' for English alphabet letters A to Z. Further transcendental (5-space) code values are associated with the Devnagri alphabet letters as under, which give rise to NVF (Cube) = 31 and TCV (घनः)= 27.

Devnagri alphabet format

Transcendental code values format

Vowels

Letter	अ इ उ ऋ लृ ए ओ ऐ औ								
TCV values	1	2	3	4	5	6	7	8	9

Consonants

5 x 5 varga consonants

Letters	क	ख	ग	घ	ङ
---------	---	---	---	---	---

TCV values 1 2 3 4 5

Letters त थ द ध न

TCV values 4 5 6 7 8

Letters प फ ब भ म

TCV values 5 6 7 8 9

Other letters

Letters य व र ल

TCV values 1 3 5 7

Letters श ष स ह

TCV values 2 3 6 9

Letters • उँ उँ : ः ः ः ः

TCV values 9 10 11 12 13 14 15 16

Objective Type questions and Answers

I. How many are

(i) Axis of three dimensional frame? A. 3

(ii) Corner points of cube? A. 8

(iii) Edges of cube? A. 12

(iv) Surfaces of cube? A. 6

II. Body of

(i) 0-space is point? A. Point

(ii) 1-space? A. Interval.

(iii) 2-space? A. Square

(iii) 3-space? A. Cube

(iv) Dimension of Cube? A. Linear.

(v) Boundary of cube? A. Spatial

(vi) Domain of cube? A. Solid.

(vii) Origin of cube? A. Hyper solid.

III. How many are components of

(i) cube? A. 31.

(ii) boundary of cube? A. 6

(iii) three dimensional frame? A. 4

IV. How many are sub cubes of cube

A. 8

V. How many are the components of geometric envelope of cube?

A. 26

VI. Give the split of 26 components of geometric envelope of cube

(i) 8 corner points.

(ii) 12 edges.

(iii) 6 surface plates

VII. What is the distinguishing feature of three dimensional frame embedded in corner of the cube?

A. It is of half dimensions set up.

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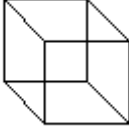
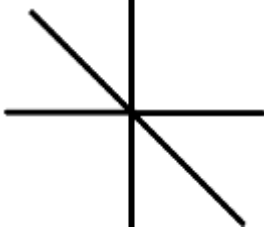
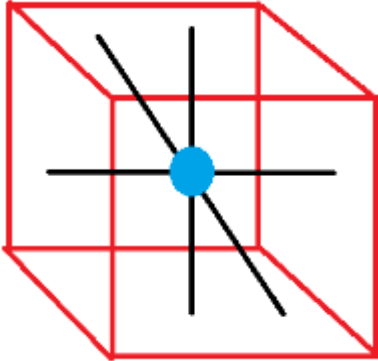
Short questions

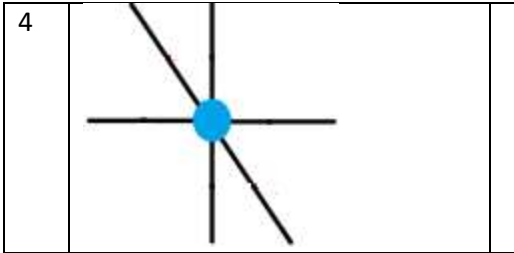
Define following technical terms.

1. Cube (📐)
2. Representative body of 3-space
3. Three linear dimension
4. 'length' as a 'unit';
5. 'area' as a unit,
6. 'volumme as a unit'.
7. origin of space
8. origin of dimensional frame
9. Centre of cube
10. The set up of 'cube'
11. Complete set up of cube
12. Corner points
13. Edges
14. Surfaces
15. Volumme
16. Structural components
17. Geometric components

Elaborative questions

1. Elaborate the glaring features of concepts re-personated by following figures.

Sn.	Figure	
1		
2		
3		



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LESSON – 02

GEOMETRIC ENVELOPE OF CUBE (📦)

Overview of lesson

1. We have learnt during previous lesson about the set up of cube as of components of format and features of (i) points (ii) Lines (iii) Surfaces and (iv) Volume.
2. Of these four types of components first three components namely (i) points (ii) Lines (iii) Surfaces constitute a class which does not contribute towards volume.
3. Though corner points, edges and surface plates of the set up of cube do not contribute towards volume of the cube but there together play a significant rule of enveloping 'volume', as a bag containing 3-space content lump.
4. During this lesson the focus is upon this geometric envelope of cube.

5. The significance of role of geometric envelope deserve to be comprehended well. The components of geometric envelope and there features deserve to be appreciated.
6. The imbibing of the format and features of geometric envelope of cube, on the whole, and of its individual categories of components, as well as the number of components of every category will help acquire insight about the significance of the role of geometric envelope of cube.
7. In our daily life in the world around us.
8. We come across fruits and vegetables of various types having their own characteristics types of geometric envelopes for the fruit / vegetable contents.
9. At the end of text of the lesson to provide further insight about the set up of cube, advance exercises are indicated. Though these advance exercises relate to features of the set up of cube, which would be taken up in the subsequent lesson but here itself to provide insight about further features, same are being mentioned to ensure that one does not get an idea that everything gets sealed within geometric envelope as a volume which will not permit transcendence any further.
10. It is for this reason that it is being impressed upon teachers that there shall take care that young minds do not acquire mental blocks about the set up of the volume of the cube.

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Text of Lesson

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1. The structural set up of cube as a set of 31 components
 - i. 8 corner points,
 - ii. 12 edges,
 - iii. 6 surfaces,
 - iv. one volume,
 - v. 3 axes and
 - vi. 1 origin),

2. This set up of 31 components, firstly permits its classification being of two parts,

namely the first part consisting of

- i. 8 corner points
- ii. 12 edges,
- iii. 6 surfaces
- (iv) and 1 volume an

And second part consisting of

- (v) 3 axes
- (vi) and 1 origin.

3. The above **second part** consisting of 3 axes and 1 origin is designated as the **three dimensional frame**.

4. The **first part** which consist of 27 components namely (8 corner points, 12 edges, 6 surfaces and 1 volume) further permits classification in **two parts, namely**

first part consisting of

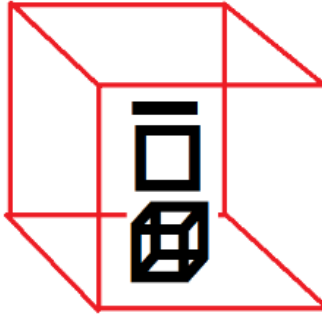
- i. 8 corner points
- ii. 12 edges,
- iii. 6 surfaces

and **second part** consisting of

- (iv) and 1 volume

5. The above single component (second part), namely 'volume' is designated as 'domain part'.
6. The set up of 26 components of (first part) i.e. 8 corner points, 12 edges and 6 surfaces together synthesize a **geometric envelope** for the domain / volume part of the cube.
7. Each of these 26 components of geometric envelope is of zero volume as corner points are devoid of length, breadth and height, while edges are devoid of breadth and height, and surfaces are devoid of heights.
8. With geometric envelope having no contribution towards the volume of the cube, as such one way to reach at the geometric envelope of the cube would be to devoid the cube of its volume.
9. As the volume is a manifested lump of 3-space content, and as this manifestation is within a three dimensional frame, as such the devoiding steps for the cube of its volume, naturally can be in terms of the dimensions which are three in number.
10. This that way shall be leading to three steps, the first being in terms of a single dimension, the second being in terms of a pair of dimensions and third being in terms of all the three dimensions.

11. Here it would be relevant to note that the volume of the cube permits simultaneous existence of 'interval, square and cube' within a cube.



12. Further it also would be relevant to note that interval is a structural set up of three components namely length and a pair of end points of the interval.
13. Square is a structural set up of 9 components namely (4 corner point, 4 sides and 1 area).
14. Cube is a structural set up of 27 components consisting of 8 corner points, 12 edges, 6 surfaces and 1 volume.
15. The artifices triple $(3, 9, 27)$ permits re-organization as $(3^1, 3^2, 3^3)$.
16. This further permits re-organization as $[(1+2)^1, (1+2)^2, (1+2)^3]$
17. This organization format $[(1+2)^1, (1+2)^2, (1+2)^3]$ is a particular case of general organization format $(A+2)^n$, $n = 1, 2, 3$ and A to be any unit.
18. This way, the dividing of cube of its volume, shall be leading us to the geometric envelope for the format for manifestation of volume / domain of 3-space content.

19. The feature of geometric envelope of cube being of 26 components would bring into the format and feature of number '26'.
20. Here it would be relevant to note that the numbers range 1 to 100 has precisely a range of 26 primes (including 1), namely

(1, 2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31, 37, 41, 43, 47, 53,
59, 61, 67, 71, 73, 79, 83, 89 and 97).
21. The geometric envelope set up of 26 components and the range of 26 primes over the range of numbers up till 1 to 100, on their chase will help workout the parallel formats and features of geometric formats on the one hand and artifices of numbers on the other hand.
22. To have further insight about the insight of the format and features of the geometric envelope, one shall have a fresh visit to the set up of cube and its geometric envelope of 26 components with split of 8 corner points, 12 edges and 6 surfaces enveloping volume of the cube.
23. It would come to attention that in each of the corner points of the cube is embedded a three dimensional frame of half dimensions.
24. It is this feature of the geometric envelope, which deserve to be chased further for its full comprehension and appreciation for imbibing its features and values to have thorough insight about it.
25. There being 6 surfaces, as such with their presence as 0, 1, 2, 3, 4, 5 and 6 surfaces, there would be 7 versions of cube.
26. Cube as 3-space body having 7 versions brings to focus the coordinated presence of artifices pair (3 and 7).

Exercises

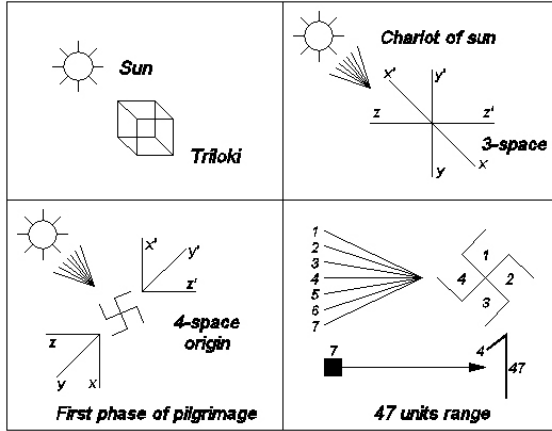
- I. It would be blissful to go through the feature of 'Trishapta (3 and 7) concept and format of Vedic Systems and to acquire insight about Vedic Systems approach to the set up of 3-space / 3-space content and 3-space bodies accepting 7 versions of 7 geometries of 3-space.
- II. It further would be very blissful to revisit the structural set up of the cube, in the light of following structural features of this set up:

ADVANCE EXERCISES FOR FURTHER INSIGHT ABOUT THE SET UP OF CUBE

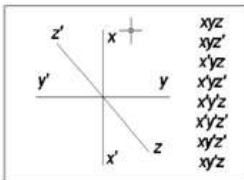
TRISHAPTA (3 AND 7)

“Yeh Trishapta Paryanti Vishwa” (This world is enveloped by Trishapata i.e. 3 and 7). Parallel to it is that 3-space (☐) has 7 geometries of signatures (0, 1, 2, 3, 4, 5, 6) corresponding to the cube with no surface plate, cube with 1 Surface plate, cube with 2, 3, 4, 5 & 6 surface plates respectively

ORIGIN OF 3- SPACE (☐)



Things transform just with the attention at the origin. Let us have attention at the centre of cube / origin of 3-space (☐) and everything starts transforming; the cube splits into 8 sub-cubes and 3-space (☐) splits into 8 octaves. The origin accepts 8 sub-cubes / 8 octaves enveloping. The 4-space (⊠) flourishes from within at the seat of origin and everything transforms from 3-space (☐) to 4-space (⊠). This may be depicted and chased as pilgrimage on chariot of Sun driven by seven horses:



Interval	Square	Cube	Hypercube-4
—	☐	☐	⊠

A. 1. 8 corner points, 2. 12 surfaces and 3. 6 surfaces.

Q4. What is the glaring feature of three dimensional frame embedded in corner points of cube?

A. It is three dimensional frame of half dimension.

Q. 5. What is the other features of dimensional frames embedded in corner points of cube?

A. The dimensional axes are of inward orientations that is towards the domain part i.e. towards insight the set up of geometric envelope.

Q. 6. What is contribution of geometric envelope towards volume of the cube.

A. Geometric envelope does not contribute towards volume of the cube. The geometric envelope simply envelopes the volume of the cube.

Q. How the inner three dimensional frame of cube with origin at center of the cube distinguishing itself from the three dimensional frame in corner of the cube?

A. The inner three dimensional frame of cube is of full dimension while the three dimensional frame within corner of the cube is of half dimension.

Q. How many versions are there of cube

A. 7.

Q How different versions of cube distinguish themselves from each other?

A. The presence of number of surface plates distinguish between different versions of cube.

Q. What is mathematical message of formulation 'Trishapta'.

A. Trishapta means 3 and 7. This inter-relationship of artifices pair (3 and 7) is parallel to cube as 3-space body having 7 versions

Q What are the distinguishing features of center of cube from other points of cube?

A. Volume. Center is a point of cube (volume) but at the same time it is seat of origin of three dimensional frames as well. As such it has a dual status.

Q. How the center of the cube and corner points of the cube are distinguishable.

A. Center of the cube is part of volume of the cube. While the corener points of the cube are part of the geometric envelope of the cube, but other distinuigh feature is there distinguishing center of the cube from corner points of cube. Center of the cube is origin a three dimensional frame of full dimensions while corner points of the cube are origins of three dimensional frames of half dimensions.

Q Chase split of cube as 8 sub cubes

A. The split of three dimensional frame of full dimensions and thereby cut of 3-space into 8 octants leads to split of cubes into 8 sub cubes .

DEFINE AND ELOBRATE FOLLOWING TECHNICAL TERMS

9. Geometric envelope
- 10.** The structural set up of cube
- 11.** corner points
- 12.** edges
- 13.** surfaces
- 14.** volumme

15. axes
16. origin
9. structural components
10. domain part.
11. geometric envelope for the domain
12. devoid of length
13. devoid of length, breadth
14. devoid of length, breadth and height
15. devoid of volume.
16. Single dimensions
17. Pair of dimensions
18. All the three dimensions
19. interval, square and cube
20. end points
21. side of a Square
22. artifices of numbers
23. 26 primes
24. parallel formats
25. organization format
26. three dimensional frame of half dimensions.
27. 'Trishapta
28. Vedic Systems
29. 3-space content
30. 3-space bodies.
31. 8 sub cubes
32. 8 octants
33. 4-space (T)

Chase and elaborate the concept and features depicted by following symbolic depiction



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LESSON – 03

7 VERSIONS OF CUBE (四)

Overview of lesson

1. In previous lesson-02 we have learnt about geometric envelope of cube.
2. The geometric envelope of cube is stitched by eight corner points, 12 edges and 6 surfaces.
3. With points and edges having no contribution towards surface area, as such this envelope and the boundary of cube, as such is spatial in nature and is of six parts consisting of six surfaces plates.
4. With this, from availability of all the six surface plates to the position of absence of all the six surface plates, there are seven versions of cube.
5. Each version of cube is taken as geometric body of parallel (signature / presence of numbers of surface plates) geometry of 3-space.
6. As such there are 7 distinct geometries of 3-space. the concept of different geometries of a dimensional space, as such is being not taken up in the present stage course.
7. However, may be taken by way of definition that distinct nature of body of a dimensional space is there because of distinct geometry of the concerned dimensional space.

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Text of Lesson

1. Cube with all the six surface plates intact, is only one of the seven versions of cube. The same may be symbolically depicted as under:



2. This version of the cube, with all the six surface plates being intact is taken as cube of signature – 6, taking as that the presence of surface plate would mean it has put its signature (of presence) and that way the presence of all the six surface plates would mean all of them have put their signature of presence which would make this version of cube being the cube of signature 6.
3. A cube with 5 surface plates intact would be the cube of signature 5 and the same may be symbolically depicted as under with black surface showing absence of surface plate and white surfaces marking the presence of surface plates:



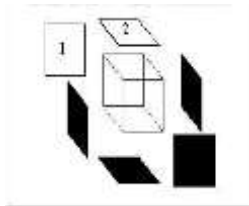
4. A cube with 4 surface plates intact would be the cube of signature 4 and the same may be symbolically depicted as under with black surfaces showing absence of surface plates and white surfaces marking the presence of surface plates.:



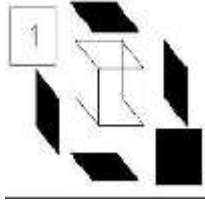
5. A cube with 3 surface plates intact would be the cube of signature 3 and the same may be symbolically depicted as with black surfaces showing absence of surface plates and white surfaces marking the presence of surface plates:



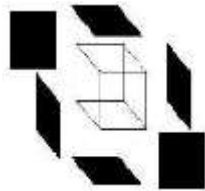
6. A cube with 2 surface plates intact would be the cube of signature 2 and the same may be symbolically depicted with black surfaces showing absence of surface plates and white surfaces marking the presence of surface plates.::



7. A cube with 1 surface plates intact would be the cube of signature 1 and the same may be symbolically depicted with black surfaces showing absence of surface plates and white surface marking the presence of surface plate:



8. A cube with absence of all six surface plates is cube of zero signature and same may be symbolically depicted with black surfaces showing absence of surface plates:







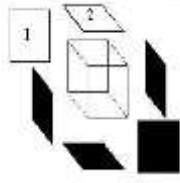
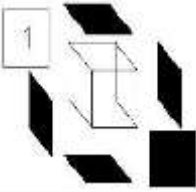
9. The above depictions and designations of seven versions of cube as versions of (signature 6, signature 5, signature 4, signature 3, signature 2, signature 1, signature 0) can be alternatively approached in terms of signature 4 versions with three surfaces plates intact and three surface plates being absent as the middle placement version of cube and parallel to its geometry may be taken as the middle placement geometry of 3-space
10. This middle placement version of cube and parallel to it the middle version of geometry of 3-space may be designated as geometry (3, -3).
11. We may have a pause here and note that this geometry (3, -3) leads to cube version having three surface plates being intact and 3 surface plates being absent, permitting depiction as under:

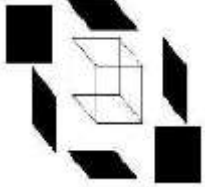


12. The feature of this middle placement geometry and parallel versions of cube is depicted by the difference of surface plate present and surface plate absent being '0' – (3-3).
13. In reference to it 7 geometries range would be of features sequence values (-3, -2, -1, 0, 1, 2, 3) parallel to the summation values of surface plates present and surface plates absent in each case.
14. The sequential depiction for the versions of cube and parallel to it of parallel geometries with the excess of number of plates than the presence of three surface plates would be (1, 2, 3) respectively and the excess absence of surface plates then the number of absence plates (3) for the middle placement, would be of values triple sequence (-1, -2, -3).
15. Here it would be relevant to note that value (-3) would be because of the versions of cube having absence of all the six surface plates, as this excess efficiency is over the middle placement deficiency being (-3).
16. That way the features depiction range (-3, -2, -1, 0, 1, 2, 3) would be parallel to signature depiction range of seven geometries as (0, 1, 2, 3, 4, 5, 6) being of arrangement.
17. This leads us to following comparative tabulation of the arrangements of 7 versions of cube and parallel to it 7 geometries range of 3-space in respect of above both methods of depictions, firstly as signatures (6, 5, 4, 3, 2, 1, 0) and secondly as (0, 1, 2, 3, 4, 5, 6) which is parallel to (-3, -2, -1, 0, 1, 2, 3).

C1= Versions of cube C2 = First type of depiction C3= second type of depiction c4= equivalent type of second type of depiction, SI = Signature, FV= Feature value, EFV (DS)= equivalent feature value (deficiency of surface)

Sn	C1	C2	C3	C4

1		SIG 6	Fv 3	EFV (DS) 0
2		SIG 5	Fv 2	EFV (DS) 1
3		SIG 4	Fv 1	EFV (DS) 2
4		SIG 3	Fv 0	EFV (DS) 3
5		SIG 2	Fv -1	EFV (DS) 4
6		SIG 1	Fv -2	EFV (DS) 5

7		SIG 0	Fv -3	EFV (DS) 6
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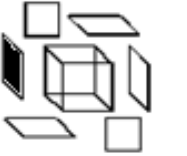


Exercises

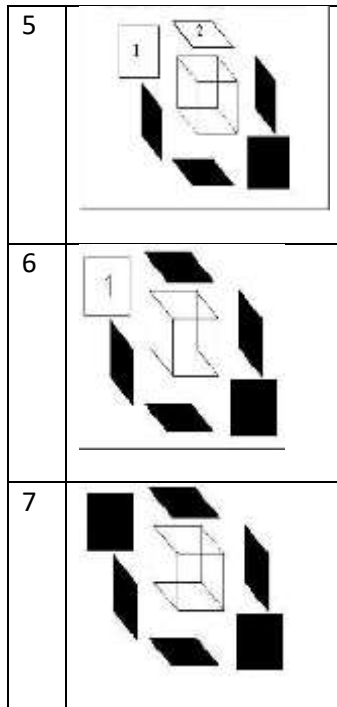
1. Define and elaborate
 - a. 7 versions of cube
 - b. Parallel 7 geometries of 3-space of second

2. Define and elaborate
 - a. 0 signature version of cube and parallel zero signature geometry of 3-space
 - b. 1 signature version of cube and parallel zero signature geometry of 3-space
 - c. 2 signature version of cube and parallel zero signature geometry of 3-space
 - d. 3 signature version of cube and parallel zero signature geometry of 3-space
 - e. 4 signature version of cube and parallel zero signature geometry of 3-space
 - f. 5 signature version of cube and parallel zero signature geometry of 3-space
 - g. 6 signature version of cube and parallel zero signature geometry of 3-space

3. Define and elaborate
 - a. first type of depiction of 7 versions of cube
 - b. second type of depiction of 7 versions of cube
 - c. equivalent depiction for second type of depiction of 7 versions of cube.

4. Define and elaborate the following symbolic depictions

Sn	C1
1	
2	
3	
4	



5. Define and elaborate the following technical terms

1. versions of cube
2. spatial boundary'.
3. 2-space content.
4. zero area point
5. six surface plates.
6. 'interval'.
7. 'square'
8. signatures as mark of presence
9. 7 geometrics of 3-space
10. First set of triple plates
11. Second set of triple plates .
12. dual status
13. zero signature geometry

14. middle placement geometry

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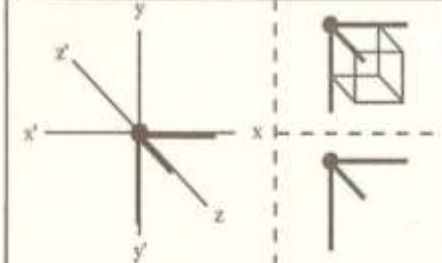
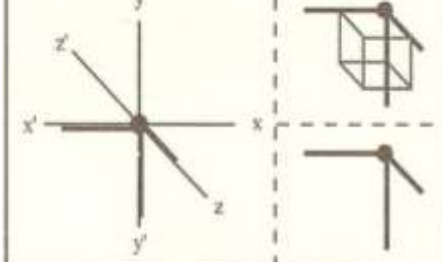
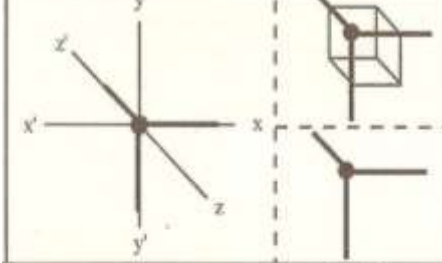
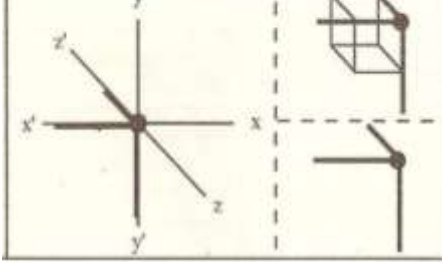
LESSON – 04**EIGHT OCTANTS CUT OF 3-SPACE***Overview of lesson*

1. Three dimensional frame cuts space into eight octants.
2. Parallel to it when origin of three dimensional frame is of placement at center of the cube, the cube perits its split into 8 sub cubes.
3. This feature of split of space in terms of three dimensional frame into 8 octants and parallel to it the split of cube into eight sub cubes deserve to be chased to be chased
4. This chase would bring to focus the feature of the cube as that in all the eight corner points of cube there is embedded a three dimensional frame of half dimensions.
5. Further as that the orientations of dimension are inward i.e. towards and along the geometric envelope of cube.
6. With it from both end points of each edge there is a meeting point at middle of the edge of the pair of dimensions of opposite orientations which neutralized at the middle and make the middle point of an edge being a synthetic joint which ultimately leads to the split for the cube into 8 sub cubes.
7. As such the basic focus of the present lesson is upon the three dimensional frames embedded in each of the corner point of the cube
8. One shall draw a three dimensional frame at any point of space. one shall further attempt to cut soap cake into 8 parts with a knife in three steps parallel to three axes of three dimensional frame.

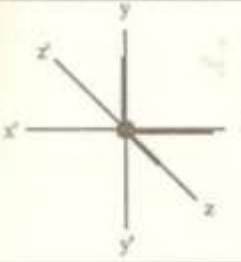


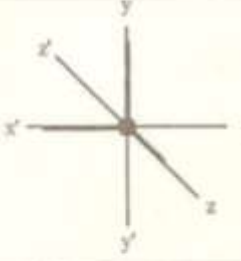


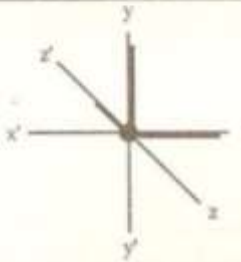


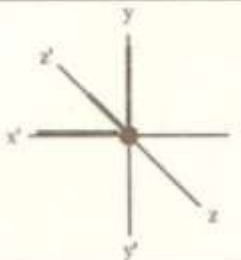


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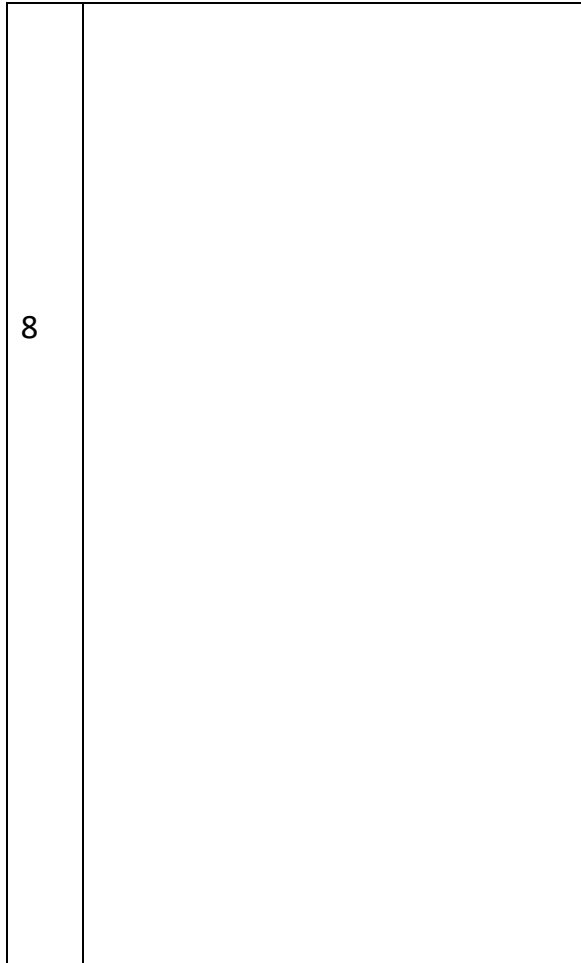
Text of Lesson

1. Draw a Three dimensional frame at any point of the space.
2. Chase sequentially as per the steps tabulated hereunder in respect of first to eighth octant of the space standing cut in terms of a three dimensional frame.

SN. 1	
2	
2	
3	

4	
---	--

SN. 5		 
		 
6		 
7		 







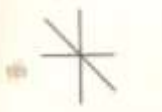



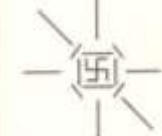



35. Let us again revisit the set up of the edges of the cube.
36. Each edge of the cube accepts a synthetic joint at its middle because of a pair of dimensions of pair of end points (corner points).
37. One may have a pause here and take note that $8 \times 3 = 24$ half dimensions of three dimensional frames of all the eight corner points together synthesize 12 edges with each edge being a synthetic set up of a pair of

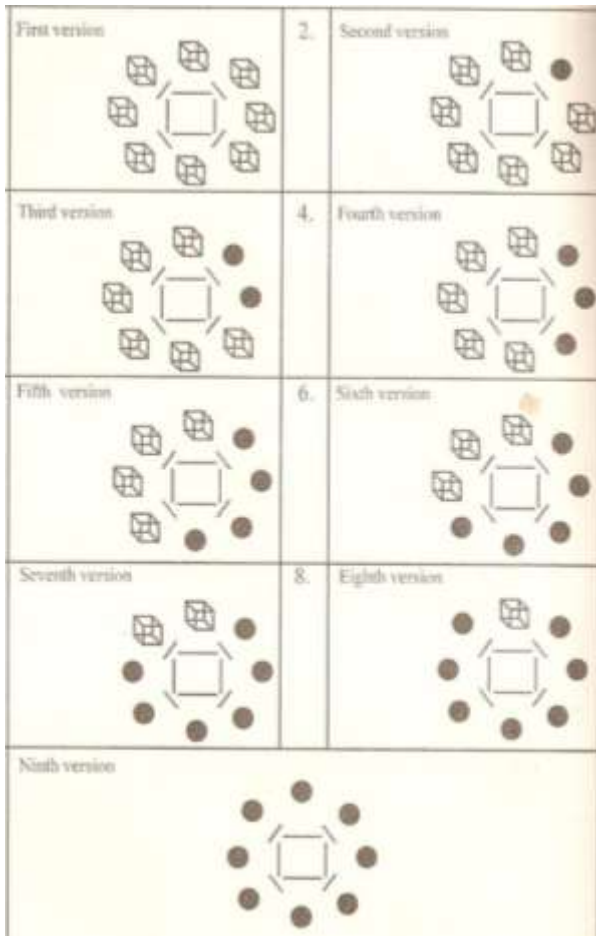
half dimensions, and that way making each edge a set up of a full dimension.

38. This set up of edges, four in number framing surface plate of the cube shall be bringing us face to face with the organization feature permitting split of the surface plate in four quarters.
39. One may further have a pause here and take note that each edge of the cube is the edge of a pair of surface plates.
40. This feature of the edge will further brings to focus that each point of the edge is the origin point of a two dimensional frame of half dimensions.
41. One may further have a pause here and take note that while each point of the edge is the origin of a two dimensional frame of half dimensions but the end points (corner points of the edge are the origin points of three dimensional frames of half dimensions).
42. One may further have a pause here and take note that as the cube would be of a diminishing volume, the same ultimately would reach a phase and stage of collapse of eight corner points at center of the cube and in the process the whole range of in between points of the edges as well would have a simultaneous merger with the corner points and a collapse at the center.
43. It is this feature of the merger of in between points of the edges with the corner points of edges will also brings to focus as to how the origin of a two dimensional frame transits and transforms into origin of a three dimensional frame, and a step ahead into the origin of four dimensional frame and thereby would come to focus the feature of compactification of origins at middle point of line / center of square / origin of cube and so on.
44. It is the feature of compactification Phenomenon at the origin which is responsible for the split of cube into 8 sub cubes and parallel to it there being a cut of 3-space into 8 octants.
45. One shall chase this split of cube into 8 sub cubes and parallel to it the split of 3-space into 8 octants to properly comprehend and to appreciate the features of this organizational set up.
46. One way to chase it would be to cut the soap cake with knife in three steps to make it of eight parts.

47. The other way would be to have eight soap cakes of equal sizes and to set them into a bigger soap cakes.
48. This set up of bigger soap cake of eight equal sub cakes shall be having internal meeting point for the internal corners of eight soap cakes.
49. One may have a pause here and take note that the internal corner of the soap cake is parallel to the origin of a three dimensional frame.
50. That way, it can be observed as that internal corners of eight soap cakes, as origin points of three dimensional frames are enveloping the center of bigger soap cakes.
51. One may have a pause here and take note that this set up, as such is of the format and features of 4-space as such a release of 4-space at origin of cube / 3-space enveloped within solid boundary of eight components, to be designated as hyper cube 4.

Symbolic representation		Structural aspect
full dimensions frame	half-dimensions frame	
		Origin of 3-space ● Origin
		Origin of 3-space 4-space

		Dimensional frame Swastik (卐)
		Dimensional frame 4-space
		Hypercube-4
		5-space as origin of 4-space



52. Let us have a fresh look at the set up of the cube again.

53. Cube is a set up of 27 components (8 corner points, 12 edges, 6 surfaces and 1 volume) and a three dimensional frame of 4 components (3 axes and 1 origin).

54. Cube as a set up of 27 components, when is joined surface to surface with another cube, 9 of the components (of the in between surface

namely 4 corner points, 4 edges and 1 surface area) gets super imposed and thereby the combined set up becomes of $27 + (27-9) = 27 + 18 = 45$ components.

55. Now if another cube is joined along with other surface to make the second row, then this start with cube of second row would be of $(27-9) = 18$ components. When second cube is added to the second row it shall be contributing only $18 - 6 = 12$ components and thereby the total components of the second row of pair of cubes would be $18 + 12 = 30$.
56. Thereby the total components of both rows of 2 cubes each shall be together making out a set up of $45 + 30 = 75$ components in all.
57. Now if the second storey is built upon this base storey of four cubes of a pair of paired cubes (4 cubes as a set up of a pair of rows as above of 75 components) then
 - (i) The first row of the second storey shall be a set up of 18 components and the second cube of the said first row of second storey would be of 12 components and thereby the first row of second storey shall be contributing $18 + 12 = 30$ components.
 - (ii) The first member of the second row of second storey would be a set up of 12 components. However second member of the second row of the second storey would be of $12 - 4 = 8$ components and thereby the second row of second storey would be set up of $12 + 8 = 20$ components in all.
 - (iii) This way the total components of both the rows of second storey would be $30 + 20 = 50$ components.
58. With it the structural set up of both the stories of pair of rows each of pair of cubes would be $(45 + 30) + (30 + 20) = 125 = 5 \times 5 \times 5$.
59. Here it would be relevant to note that the set up of eight cubes (as above) is parallel to eight octants cut of the cube.
60. As such eight octants set up (2^3) leads to $125 = 5^3$ components set up.
61. It would be a blissful exercise to note that 3^3 sub cubes set up of the cube shall be leading to 7^3 components.
62. It would further be a blissful exercise to note that to workout n^3 sub cubes split of cube as a set up of $(2n + 1)^3$ structural set up.
63. Here it would be relevant to note that n-space accepts $(2n + 1)$ geometries range

Exercises

1. Draw a three dimensional frame at any point of the space and to elaborate cut of the space in eight octants.
2. Draw a three dimensional frame with origin at center of the cube and elaborate split of the cube into 8 sub cubes.
3. Elaborate the features a three dimensional frame embedded in corner of the cube.
4. Elaborate the synthetic joint at middle of the edge of the cube.
5. Synthesize cube of signature 6 with cube of signature 5 and tabulate the components of this synthetic set up.
6. Synthesize signature 5 cube along x axes of signature 6 cube.
7. Synthesize signature 5 cube along x axes of cube and further also to synthesize 5 signature cube along y axis of the cube.
8. Tabulate the component of this synthetic set up of six signature geometry and a pair of five signature cube along x and y axes of the cube
9. Synthesize three five signature cubes, one along each of the three axes namely x axes, y axes and z axes. And to tabulate the components of this synthetic set up.
10. Synthesize two five signature cubes and one four signature cube with a six signature cube along its x axes and y axes surface and to compute the components of this synthetic set up.
11. Synthesize one five signature cube, two four signature cube and 1 three signature cube as second storey for the above synthetic set up of two five signature cubes and one four signature cube along x axes and y axes surface of first storey synthetic set up.
12. And to compute the components of emerging synthetic set up of both stories of eight cubes of above signature features.
13. Define and elaborate line versions of hyper cube 4.

Technical Terms

1. Eight octant
2. cut of 3-space
3. corner points
4. three dimensional frame of half dimensions.
5. edges
6. synthetic joint at its middle of the edge
7. half dimensions
8. synthetic set up of a pair of half dimensions
9. full dimension.
10. four quarters.
11. Split of surface plates
12. point of the edge as origin three dimensional frame
13. each point of edge is origin of a two dimensional frame
14. collapse of corner points
15. compactification of origins
16. compactification Phenomenon
17. internal corner point of sub cubes
18. release of 4-space at origin of 3-space

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LESSON – 05

NINE POINTS FIXATION OF A CUBE

Overview of lesson

1. Fixation of cube as enveloped 3-space domain as an integrated set up is attained in terms of eight corner points of the cube and ninth center of the cube.
2. The split of cube as eight cube cubes and re-synthesis of 8 sub cubes as cube brings into the set up of 8 centers of 8 sub cubes and 9th center of the main cube.
3. This internal cube with its eight corner points having placements at centers of 8 sub cubes of the main cube and the center of this cube super imposed upon the center of the main cube, makes this internal cube as the 9th sub cube, as much as that the volume of this 9th cube is equal to the volume of any of the sub cubes.
4. This feature of 3-space domain remaining enveloped within a geometric frame and retaining its integrity deserve to be comprehended well and the same to be appreciated fully for its complete imbibing for the thorough insight about this integrity feature of 3-space domain.
5. Simultaneously it would be blissful to have a fresh look at 9 points fixation of square.
6. Still further, it would be very blissful to glimpse fixation of hyper cube 4 as well in terms of eight solid boundary components and ninth solid dimensional order origin of 4-space / center of hyper cube 4.
7. Still further it would be blissful to glimpse fixation of transcendental (5-space) domain in terms of triple values (1, 3, 5) parallel to the transcendence process of transcendental (5-space) domain firstly reaching the phase and stages of its solid dimensional order. And at next step the transcendence reach being at linear dimension of dimension order of transcendental (5-space) domains itself.

8. Still further it would be very blissful to glimpse the fixation of self referral (6-space) domain as in the role of self referral (6-space) dimensional order with 9-space in the role of origin fold of the four fold manifestation layer (6, 7, 8, 9).
9. The fixation of 7-space as dimensional order of 9-space as domain fold deserve to be comprehended well and the same to be appreciated fully for its complete imbibing and have thorough insight about it.
10. 9-space playing the role of origin of 8-space and thereby having fixation of 8-space is the transcendental (5-space) Phenomenon which deserve to be glimpsed by permitting the transcending mind to continuously remain in prolonged sitting of trans.
11. Brahman domain (9-space) going self referral (6-space) and of transcendental (5-space) state simultaneously of its own by unfolding itself as dimensional order of manifestation layer (9, 10, 11, 12) and manifesting transcendental (5-space) boundary of 12 components for the self referral (6-space) domain and Sun (6-space) multiplying and manifesting as 12 Suns is the Brahman Phenomenon which shall be urged to be glimpsed by permitting the transcending mind to continuously remain in prolonged sittings of trans in most gentle way in transcendental (5-space) environment.

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Text of Lesson

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1. One shall initiate oneself for fixation of dimensional domains with the set up of 9 numerals range (1, 2, 3, 4, 5, 6, 7, 8, 9) accepting (5) at its middle placement.

2. A step ahead, five steps long range of five numerals (1, 2, 3, 4, 5) accepts '3' at its middle placement.
3. A step further ahead, three numerals range (1, 2, 3) accepts '2' at its middle placement.
4. One may have a pause here and have a fresh look at the set up of quadruple artifices (2, 3, 5, 9).
5. It would be blissful to note that :
 - (i) $2 + 1 = 3$
 - (ii) $3 + 2 = 5$
 - (iii) And $5 + 4 = 9$
6. The emerging triple values (1, 2, 4) permit re-organization as ($2^0, 2^1, 2^2$)
7. One may further have a pause here and take note that
 - (i) The internal organization of number (1) for attainment of value 1 is of only one step viz. '1 = 1'.
 - (ii) The internal organization of number '2' for value '2' is of a pair of steps viz. (a) $2 = 2$ and (b) $2 + 1 + 1$
 - (iii) Internal organization arrangement of number 3 for value 3 is of quadruple steps (a) $3 = 3$ (b) $3 = 1 + 2$ (c) $3 = 2 + 1$ (d) $3 = 1 + 1 + 1$
8. One may have a pause here and revisit above features of triple numbers (1, 2, 3) accepting internal organization arrangement for values (1, 2 and 3) respectively of single, double and quadruple steps.
9. One may further have a pause here and take note that close interval is having quadruple formats: first an interval with both points intact second an interval with only left end point intact. third an interval with only right end point intact fourth an interval with both end points being absent.
10. One may further have a pause here and take note that 3-space is a linear order space as that 1-space plays the role of dimension for 3-space as domain fold.
11. As such cube is the set up of a three dimensional frame of three linear axes.
12. The three dimensional frame in its three steps with first step as a single axis, as second step (a pair of axes) and as third step, as all the three axes.
13. One may have a pause here and take note that the first axis as dimension / measure) shall be providing a format for linear sequential progression

of ascending order parallel to the working rule of Ganita Sutra 1 'one more than before' which shall be leading from '1' to '1 + 1'.

14. One may have a pause here and take this as the first feature of '2' as a spatial order setup of 4-space whose Mathematics comes to be of features '2 as 1 and 1 as 2'.
15. The pair of axes as second feature of '2' shall be bringing to focus as that linear axes yields 'zero area' and hence 'zero value'.
16. As such pair of linear axes shall be leading to pair of zeros (0, 0).
17. One may have a pause here and take note that pair of dimensions of zero order synthesized 2-space.
18. Hence the feature of pair of linear axes framing and structuring the surfaces.
19. Finally the three linear axes for split of two dimensional frame as a pair of linear axes and parallel to it the pair of artifices (1, 1) shall be synthesizing a synthetic value '3' and parallel to it there would be 3-space value.
20. This will help us comprehend, appreciate, imbibe and to have an insight as to how three dimensional frame with its split as a set of half dimensions leads to three sequential steps for synthetic structuring of 3-space bodies within a three dimensional frame namely (i) $2 = 1 + 1$ (ii) $(0, 0) = 2$, (iii) $(1, 1) = 3$.
21. With this the fixation of cube in terms of nine points finds its printout in the form of fixation of square in terms of 9 points.
22. 4 corner points of square, 4 middle points of square and one center of the square.
23. One may have a pause here and take note that the middle points of sides of square of the synthetic joints of neutralized state being the meeting point of half dimension of opposite orientations.
24. Here One may further have a pause here and take note that in each of the four corner points of the square are embedded two dimensional frames of half dimensions with orientation of the dimensions being towards and along the edges.
25. Further it also would be relevant to note that the middle point of four edges with their coordination with center makes a format for a two dimensional frame of full dimensions.

26. Still further it also would be relevant to note that the coordination of the corner points of the square with center of the square constitutes a format for a pair of diagonals, which together as well constitute a two dimensional frame.
27. One may further have a pause here and glimpse the transposition and placement of one of this pair of dimensional frames at another's place and to imbibe the features of transformations.
28. It would further be relevant to note that this transition and transformation Phenomenon deserve to be imbibed fully by comprehending the features completely for thorough insight about it.
29. This way the 9 points fixation of square and 9 points fixation of cube deserve to be comprehended simultaneously to have insight about this fixation Phenomenon.

Exercises-1

23. Chase and learn review step no 1 and elaborate the statement:
 "Fixation of cube as enveloped 3-space domain as an integrated set up is attained in terms of eight corner points of the cube and ninth center of the cube."
2. Chase and learn review step no 2 and elaborate the statement:
 The split of cube as eight cube cubes and re-synthesis of 8 sub cubes as cube brings into the set up of 8 centers of 8 sub cubes and 9th center of the main cube.
3. Chase and learn review step no 3 and elaborate the statement:
 This internal cube with its eight corner points having placements at centers of 8 sub cubes of the main cube and the center of this cube super imposed upon the center of the main cube, makes this internal cube as the 9th sub cube, as much as that the volume of this 9th cube is equal to the volume of any of the sub cubes.
4. Chase and learn review step no 4 and elaborate the statement:

This feature of 3-space domain remaining enveloped within a geometric frame and retaining its integrity deserve to be comprehended well and the same to be appreciated fully for its complete imbibing for the thorough insight about this integrity feature of 3-space domain.

5. Chase and learn review step no 5 and elaborate the statement:
Simultaneously it would be blissful to have a fresh look at 9 points fixation of square.
6. Chase and learn review step no 6 and elaborate the statement:
Still further, it would be very blissful to glimpse fixation of hyper cube 4 as well in terms of eight solid boundary components and ninth solid dimensional order origin of 4-space / center of hyper cube 4.
7. Chase and learn review step no 7 and elaborate the statement:
Still further it would be blissful to glimpse fixation of transcendental (5-space) domain in terms of triple values (1, 3, 5) parallel to the transcendence process of transcendental (5-space) domain firstly reaching the phase and stages of its solid dimensional order. And at next step the transcendence reach being at linear dimension of dimension order of transcendental (5-space) domains itself.
8. Chase and learn review step no 8 and elaborate the statement:
Still further it would be very blissful to glimpse the fixation of self referral (6-space) domain as in the role of self referral (6-space) dimensional order with 9-space in the role of origin fold of the four fold manifestation layer (6, 7, 8, 9).
9. Chase and learn review step no 9 and elaborate the statement:
The fixation of 7-space as dimensional order of 9-space as domain fold deserve to be comprehended well and the same to be appreciated fully for its complete imbibing and have thorough insight about it.
10. Chase and learn review step no 10 and elaborate the statement:

9-space playing the role of origin of 8-space and thereby having fixation of 8-space is the transcendental (5-space) Phenomenon which deserve to be glimpsed by permitting the transcending mind to continuously remain in prolonged sitting of trans.

11. Chase and learn review step no 11 and elaborate the statement: Brahman domain (9-space) going self referral (6-space) and of transcendental (5-space) state simultaneously of its own by unfolding itself as dimensional order of manifestation layer (9, 10, 11, 12) and manifesting transcendental (5-space) boundary of 12 components for the self referral (6-space) domain and Sun (6-space) multiplying and manifesting as 12 Suns is the Brahman Phenomenon which shall be urged to be glimpsed by permitting the transcending mind to continuously remain in prolonged sittings of trans in most gentle way in transcendental (5-space) environment.

12. Chase and learn the conceptual theme

Aim is to approach the set up of 'cube (🎲)', in its fixed stage.

Fixed states means, a state in which the structural set up of the body (here cube) remains integrated whole as wholesome unit.

13. Chase and learn the conceptual theme

Technical terms here are about the different components of the set up of the cube.

It would be a blissful exercise to tabulate these terms appearing in the text of the lesson.

Further, it also would be a blissful exercise to include these terms in Dictionary being attempted by the readers.

The conceptual base and other features of these terms as well to be included in the explanatory notes in the Dictionary beneath these entries of the dictionary.

14. Chase and learn the following information

Overview of the information surfacing in the text of the lessons as well be drawn as an exercise of evaluation of the one's own comprehension of the lesson and appreciation of the emerging values of the lesson.

This overview is not only a summary of the lesson but it also is a projection of its inter-relationship with the previous lessons as well as about what is to follow the present lesson.

As such reaching at overview of the information of the lesson would be a complete index of understanding and imbibing of the values of the lesson and of insight of the virtues of the values learnt while being through the lesson.

15. Have a fresh visit of the set up of cube and comprehend it thoroughly it in the light of the set ups of square and hyper cube 4 and transcendence steps from domain to dimension and dimension to dimension of dimension:

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LESSON – 06

व्यष्टिसमिष्टः

VYASTHI SMASTHI
Part and Whole

Overview of lesson

1. Each Ganita Sutras and upsutras is complete in itself. As such all these 16 sutras and 13 upsutras deserve to be comprehended first of all independently as a Mathematics values and thereafter the specific value of given Sutra and Sutra is to be comprehended in context of and also along with the Mathematics values other Sutra (s).
2. Here in this lesson, Ganita Sutra 11 namely Vyasti Smasti Sutra is going to be taken up.
3. The text of Sutra in the sequential setting of the letters availed and formulation (s) reached at comes to be as under:

व्यष्टिसमिष्टः ।

1	2	3	4	5	6	7	8	9	10
व्	य्	ट	ष्	ट्	इ	स्	अ	म्	अ
11	12	13	14						
ष्	ट्	ठ	:						

4. The chace of text of 14 letters organization of pair of basic formulations (i) व्यष्टि and (ii) समिष्टि: with simple meanings rendering acceptance by

them as 'part' and 'whole' will bring to focus as to how the part and whole can be of identical format settings.

5. The transcendental (5-space) code values of this pair of formulations TCV (व्यष्टि) = 20 and TCV (समिष्टिः) = 25 with total summation value TCV (व्यष्टिसमिष्टिः) = 58 shall be further bringing us face to face the features of this Ganita Sutra.
6. The pure and applied values of this Sutra are of many folds. Of these, the feature that there can be hyper cube n within hyper cube n like pentagon within pentagon, hexagon within hexagon deserve to be comprehended well for its appreciation and imbibing to have full insight, in respect of it.

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Text of Lesson

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Conceptual term

1. Text of Ganita Sutra 11 as a pair of conceptual formulations (i) व्यष्टि Vyasti (ii) समिष्टिः Samasti.
2. Simple meanings rendering for
 - (i) व्यष्टि Vyasti means 'part' come to be parallel to 'part' of the whole and
 - (ii) समिष्टिः Smasti means 'whole' and for Smasti come to be parallel to 'whole in reference to the given part.

Statement

3. One shall chase the following statement in reference to the meanings and working rule of Ganita Sutra 11.
4. Part and Whole, Part as Whole, Part in reference to the whole and Whole in reference to the part, both part and whole accepting common format, are the different aspect of features of meanings and working rule of Ganita Sutra 1 and these aspects deserve to be chased on first principles

approach of comparison of big and small lines, surface within surface, cube within cube and in general hyper cube n within hyper cube n .

Conceptual chase

5. The conceptual chase of the working rule of Ganita Sutra 11 can be had by having comparative understanding of (i) big and small lines / intervals both being the set ups of infinite number of points. (ii) Big and small surfaces infinite number of (iii) Big and small solids / cubes, both being the setups of infinite number of points

Cube within Cube

6. The permissibility of the set up of a cube within a cube and in general the set up of hyper cube n within hyper cube n leads to the permissibility of interval, square and cube within cube and in general interval, square, cube and hyper cube n within hyper cube n

Concept of measuring rod

7. This feature leads to the concept of a measuring rod for hyper cube 3, and in general for hyper cube n as a synthetic set up of hyper cube 1, 2 and 3 as a measuring rod of 3-space and in general the setup of HYPER CUBE 1, 2, 3 --- n for hyper cube n .

Fixation of boundary

8. The fixation of boundary of hyper cube n is attained in terms of $n \times 2n$ coordinates for all the $2n$ boundary components in reference to a dimensional frame of n dimensions of n dimensional frame

Organization of $2n^2$: coordinates.

9. Fixation of boundary of components of hyper cube n is attainable in terms of $2n^2$ coordinates of n dimensions of n dimensional frame
10. This would sequentially lead to coordinates range (2, 8, 18, 32, 50, 72, ---) for hyper cubes 1, 2, 3, 4, 5, 6, ---).
11. The coordinates range (2, 8, 18, 32, 50, 72, ---) admits re-organization as (2, 2 + 6, 2 + 6 + 10, 2 + 6 + 10 + 14, 2 + 6 + 10 + 14 + 18, 2 + 6 + 10 + 14 + 18 + 22, --/

Summation values of four folds manifestation layers of hyper cube 1 to n

12. Summation value of four folds manifestation layer (-1, 0, 1, 2) of hyper cube 1 comes to be 2
13. Likewise the summation value of four folds manifestation layer of hyper cube 2 comes to be 6.
14. Further the summation value of four folds manifestation layer of hyper cube 3 comes to be '10'.
15. One may have a pause here and have a fresh look at the above features and to reach at following table
Col 1 = Serial number col 2 = hyper cube, col 3 = boundary components, col 4 = Coordination, col 5 = manifestation layers

Col 1	Col 2	Col 3	Col 4	Col 5
1	HC 1	2	2	HC1
2	HC 2	4	8	HC1+2
3	HC 3	6	18	HC1+2 +3
4	HC 4	8	32	HC1+2 + 3+ 4
5	HC 5	10	50	HC1+2

				+3+4 +5
6	HC 6	12	72	HC1+2 +3 + 4+ 5+ 6

Exercises

16. Workout fixation of boundary of (i) hyper cube 1 hyper cube 2.
17. Workout the summation values of four fold manifestation layers of hyper cube 1+ hyper cube 2+ hyper cube 3 workout values of coordinates of boundary components parallel to the summation values of four fold summations values.
18. Define and elaborate measuring rods of hyper cube 1, hyper cube 2, hyper cube 3, hyper cube 4, hyper cube 5, hyper cube 6.

Working rule of Vyasti Smasti rule

19. Elaborate the feature cube within cube.

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LESSON – 07

HYPER CUBE 3 FORMAT

Overview of lesson

1. Hyper cubes are of four fold manifestation layers setups.
2. With it, the format of hyper cube goes parallel to the features of the manifestation layer.
3. Manifestation layer is a synthetic set up of four consecutive dimensional space contents.
4. In general, it may be depict and express as quadruple artifices (n , $n + 1$, $n + 2$, $n + 3$) parallel to n space content in the role of dimension fold, $n + 1$ content in the role of boundary fold, $n + 2$ content in the role of domain fold and $n + 3$ content in the role of origin fold.
5. The format of hyper cube 3, as such is a linear order manifestation layer format (1, 2, 3, 4) parallel to (1-space content in the role of dimension, 2-space content in the role of boundary, 3-space content in the role of domain fold, 4-space content in the role of origin fold).
6. In the light of above hyper cube 3 / cube emerges to be of feature of linear dimensional order, spatial boundary, solid domain and hyper solid (creative origin).
7. Linear dimensional order leads to a three dimensional frame of three linear dimensions (axes).
8. Spatial boundary leads to boundary of six spatial components / six surface plates of cube.
9. Solid domain permits its chase in terms of single axis, pair of axes and triple axes.
10. Origin fold is of a spatial dimensional order.
11. This feature of origin fold makes origin of three space as origin of three dimensional frame and with its placement at center of the cube splits

each dimensional axis into a pair of half dimensions and cube splits into eight sub cubes parallel to the split of 3-space into 8 octants.

12. These features deserve to be chased individually as well as in groups and collectively to have full comprehension of the set up of the cube and for appreciation of the features of this set up to have their through imbibing for attaining complete insight about 3-space bodies and different roles of 3-space (content).

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Text of Lesson

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1. The dimensional frame of 3-space avails three linear axes. The format of the dimensional axes is of expression features of 1-space content as a line.
2. The boundary of 3-space splits into six surface plates. The expression format of surface plates (individually) and collectively as (boundary) is of the values and features of 2-space content expression as surfaces.
3. The volume (domain) part of cube is of expression features which permits set up of cube within a cube and the same also permits chase in three steps, as and in terms of single axes, pair of axes and all the three axes of the dimensional frame.
4. These features of volume / domain are expression of 3-space content.
5. The placement of origin of three dimensional frame at center of the cube splits cube into 8 sub cubes parallel to the cut of the 3-space into eight octant.
6. This brings to focus the features of origin (of three dimensional frame) / 3-space / seat at center of cube being the expression of 4-space content manifesting as domain fold of 4-space body accepted solid boundary of eight components.
7. One may have a pause here and revisit above four folds features of the set up of the cube and be face to face with the emerging four fold

- synthetic format of 1-space content, 2-space content, 3-space content, and 4-space content, manifesting simultaneously.
8. With it, it would come to focus as that the manifestation format of cube is a synthetic set up of four consecutive dimensional contents namely (1-space content, 2-space content, 3-space content, 4-space content).
 9. Accordingly the manifestation format of cube, as it is to be taken as a set up of quadruple features permitting expression in terms of quadruple artifices (1, 2, 3, 4) parallel to (1-space content, 2-space content, 3-space content, 4-space content) expressions for the roles of (1-space content as dimension fold of cube, 2-space content expression for the role of boundary of cube, 3-space content expression for domain / volume of the cube and 4-space content expression for the seat of center of cube / origin of 3-space / domain fold of 4-space body).
 10. It may be taken as definition as that cube is hyper cube 3 of four fold manifestation layer of features (dimension fold role being played by 1-space content, boundary fold role being played by 2-space content, domain fold role being played by 3-space content and origin fold role being played by 4-space content).

Ganita Sutras help settle the hyper cube format

11. It would be a blissful learning to have settlement of hyper cube 3 format (and in general of hyper cube n format) with the help of the working rules of Ganita Sutras (and Upsutras).
12. The Ganita Sutras and (Ganita Upsutras) constitute a complete vedic scripture.
13. To be a complete Vedic scripture means that the scripture accepts sole syllable Om (ॐ) as its source reservoir and its synonym *Parnava* प्रणव as its End Reach
14. Ganita Sutras text, as such presumes the existence and definition of one and starts unfolding organization format with Ganita Sutra 1 itself.

15. This presumption of Existence and definition of '1' is there because of availability of these source values in the whole some formulation 'ॐ', which is of four components designated and known as 'bindu sarovar, ardh matra, tripundam and Swastik pada and same is parallel to the format of idol of Lord Brahma, creator the supreme and that way is still further parallel to the format of hyper cube 4 in particular and hyper cubes in general.
16. With it, the chase of Ganita Sutra 1 with its working rule 'one more than before', shall be providing us 'sequential order', in general and 'linear order' in particular
17. One may have a pause here and take note that this working rule, in its generality and in its special and particular applications shall be bringing us face to face with :
- (i) 1, 2, 3, 4, 5, ---
 - (ii) First, Second, Third, Fourth, Fifth, ---
 - (iii) 1, (1, 2), (1, 2, 3), (1, 2, 3, 4), ---
 - (iv) First Degree, Second degree, third degree, fourth degree, ---
 - (v) Interval, square, cube, hyper cube 4, hyper cube 5, ---
 - (vi) 1-space, 2-space, 3-space, 4-space, ----
 - (vii) 1-space content, 2-space content, 3-space content, 4-space content, -
--
 - (viii) Hyper cube 1, Hyper cube 2, Hyper cube 3, Hyper cube 4, ---
 - (ix) $N^0, N^1, N^2, N^3, ----$
 - (x) One dimensional frame, two dimensional frame, three dimensional frame, four dimensional frame, ---
 - (xi) 1-space as origin of 0-space, 2-space as origin of 1-space, 3-space as origin of 2-space, 4-space as origin of 3-space, ---
 - (xii) 0-space as boundary of 1-space, 1-space as boundary of 2-space, 2-space as boundary of 3-space, 3-space as boundary of 4-space, ---
 - (xiii) 1-space boundary of 2 components, 2-space boundary of 4 components, 3-space boundary of 6 components, 4-space boundary of 8 components,---
 - (xiv) Like that very large number of illustrative set ups can be cited, like matrix format 1, 1×1 , $1 \times 1 \times 1$, $1 \times 1 \times 1 \times 1$, ----; 1×1 , 2×2 , 3×3 , 4×4 , 5×5 and so on; $1^3, 2^3, 3^3, 4^3$ and so on

18. Origin of 3-space at middle placement, origin of 4-space at middle placement, origin of 5-space at middle placement and parallel to it origin of three dimensional frame at middle placement, origin of 4 dimensional frame at middle placement, origin of five dimensional frame at middle placement and so on shall be leading us to different features of the organization format of Ganita Sutras.
19. The middle signature geometry of 3-space, the middle signature geometry of 4-space, middle signature geometry of 5-space and so on shall as starting point for Ganita Sutra 1 would be leading us to different pure and applied values of Ganita Sutras
20. Parallel to it, middle version i.e. fourth version of seven versions of cube as a starting point shall be providing us pure and applied values of Ganita Sutras as pure and applied values of the Discipline of VMS & T of 3-space.
21. Such start shall be sequentially leading us to:
 - (i) $-1, 0, 1$
 - (ii) $-2, -1, 0, 1, 2$
 - (iii) $-3, -2, -1, 0, 1, 2, 3$
 - (iv) $-4, -3, -2, -1, 0, 1, 2, 3, 4$
 - (v) $-5, -4, -3, -2, -1, 0, 1, 2, 3, 4, 5$
 - (vi) $-6, -5, -4, -3, -2, -1, 0, 1, 2, 3, 4, 5, 6$
 - (vii) $-7, -6, -5, -4, -3, -2, -1, 0, 1, 2, 3, 4, 5, 6, 7$
22. This way seven geometries range of 3-space / seven versions range of cube along both the dimensions of spatial order (2-space in the role of dimension of 4-space) with seat at origin of three dimensional frame, shall be firstly providing exhaustive coverage for Ganita Sutras 1 to 14) and 13 Ganita Upsutras of placements of gaps in between Ganita Sutras 1 to 14) and ahead there to be the format for pair of Ganita Sutras namely Ganita Sutras 15 and 16 to be of the format of sutras 1 and 2 respectively of Ashtadhey.
23. These features deserve to be visited and revisited and to be continue till their full comprehension
24. It is with comprehension and appreciation of these features that their values can be imbibed and insight can be had about their virtues.

25. It is with this imbibing and insight that the format working rule of Ganita Sutras can be availed for progressive evaluation of intelligence field within young minds.
26. A step ahead consciousness field and emerging enlightenment as well can be made lively within the intelligence field.

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3

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VMS & T Textbook of 3-space

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VMS & T Textbook of 3-space

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*Second Semester***Text & Values of Ganita Sutras**

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2. Values of Ganita Sutras

**Intelligence growth along
Ganita Sutras format**

**First Phase along the
format of Ganita Sutras 1 to 4**

Step 1 Along the format of Ganita Sutra-1

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Intelligence growth

Second phase

Step 1 Transition from 1 to 0 and back
from 0 to 1

Step 2 Transition from 1 to 0 and back
from 0 to 1 Bridging the Gap

Step 3 Completeness and incompleteness

Intelligence growth

Third phase

Step 1 Unit, length and infinity of points

Recapitulation

Step 2 To knockout a point from unit length

Step 3 Part as a whole To knockout a point
from unit length

Step 4 Part as a whole Fractions of unit and

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Intelligence growth

Fourth phase

Step 1 Reach from the present stage to
previous state as well as to the
future state

Step 2 Unfolding of the existing state for its reach to previous state as a sequential reach.

Step 3 To have sequential increase of intelligence growth

Step 4 To intensify the intelligence growth

Intelligence growth

Fifth phase

Intelligence Field

Dwitya Variti द्वितीय वृत्ति

*Vedic mathematics, Science &
Technology Textbook*

Class IX

(3-space)

Second Semester

Steps for Intelligence growth

*On the format of Ganita
Sutras*

VMS & T Textbook of 3-space

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*Second Semester***Text & Values of Ganita Sutras**

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Intelligence growth along**Ganita Sutras format****First Phase along the****format of Ganita Sutras 1 to 4**

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Step 4 Along the format of Ganita Sutra-4

Intelligence growth

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Intelligence Field

Dwitya Variti द्वितीय वृत्ति

1

GANITA SUTRAS & UPSUTRAS

Ganita Sutra

1. एकाधिकेन पूर्वेण ।
Ekadhikena Purvena.
By One More than One before
2. निखिलं नवतश्चरमं दशतः ।
Nikhilam Navatascaramam Dasatah
All from 9 and the last from ten
3. □र्ध्वतिर्यग्भ्याम् ।
Urdhva tiryagbhyam
Vertically and crosswise
4. परावर्त्य योजयेत् ।
Paravartya Yojayet
Transpose and Apply
5. शून्यं साम्यसमुच्चये ।
Sunyam Samyasamuccaye
If the samuccaya is the same it is Zero
6. (आनुरूप्ये) शून्यमन्यत् ।
(Anurupye) Sunyamanyat
If one is in Ration the others is Zero
7. संकलनव्यकलनाभ्याम् ।
Sankalana-vyavakalanbhyam
By addition and by subtraction
8. पूरणापूरणाभ्याम् ।
Puranapuranaabhyam

By the completion or non-completion

9. चलनकलनाभ्याम् ।
Calana-kalanabhyam
Differentiation Calculus
10. यावदूनम् ।
Yavadunam
By the Deficiency
11. व्यष्टिसमष्टिः ।
Vyastisamastih
Specific and General
12. शेषाण्यङ्केन चरमेण ।
SesnyankenaCaramena
The Remainder by the last digit
13. (सोपान्त्यद्वयमन्तम्)
Sopantyadvayamantyam
The ultimate and twice the penultimate
14. एकन्यूनेन पूर्वेण ।
Ekanyunena Purvena
By One less than the One Before
15. गुणितसमुच्चयः ।
Gunitasamuccayah
The product of the Sum
16. गुणकसमुच्चयः ।
Gunaksamuccayah
All the Multipliers

Ganita Upsutras

1. आनुरूप्येण ।
Anurupyena

Proportionately

2. शिष्यते शेषसंज्ञः ।
Sisyate Sesasamjnah
That remains is remainder
3. आघमाघेनान्त्यमन्त्येन ।
Adyamadyen Antyamantyen
First with first Last with last
4. केवलैः सप्तकं गुण्यात् ।
Kevalaih Saptakam Gunyat
Only Seven as multiplicand
5. वेष्टनम् ।
Vestanam
Osculators
6. यावदूनं तावदूनम् ।
Yavadunam Tavadunam
That twice This twice
7. यावदूनं तावदूनीकृत्य वर्गं च योजयेत् ।
YavadunamTavadunikrtyaVargancaYojayet
That twice This twice Square and add
8. अन्त्ययोर्दशकेऽपि ।
Antyayordasake'pi
Ends to sum as ten
9. अन्त्ययोरेव ।
Antyayoreva
Ends to be in ratio
10. समुच्चयगुणितः ।
Samuccayagunitah
Samuchya as product
11. लोपनस्थपनाभ्याम् ।
Lopana sthapanabhyam

That missing to be established

12. विलोकनम्

Vilokanam

By observation

13. गुणितसमुच्चयः समुच्चयगुणितः

GunitaSamuccayah Samuccayagunitah

Product samuchya Samuchya Product

2

Values of Ganita Sutras

- i. “The Sutras (aphorisms) apply to and cover each and every part of each and every chapter of each and every branch of mathematics (including arithmetic, algebra, geometry-plane and solid, trigonometry-plane and spherical, cones- geometrical and analytical, astronomy, calculus-differential and integral etc.) In fact, there is no part of mathematics, pure or apply, which is beyond their jurisdiction;
- ii. The Sutras are easy to understand, easy to apply and easy to remember; and the whole work can be truthfully summarized in word ‘mental’!
- iii. Even as regards complex problems involving a good number of mathematical operations (consecutively or even simultaneously to be performed), the time taken by the Vedic method will be a third, a fourth, a tenth, or even a much smaller fraction of the time required according to modern Western methods;
- iv. And in some very important and striking cases, sums requiring 30, 50, 100 or even more numerous and cumbersome ‘steps’ of working (according to the current western methods) can be answered in a single and simple step of work by the Vedic method! And children of even 10 or 12 Years of age merely look at the sums written on the blackboard (on the platform) and immediately shout out and dictate the answers from the body of the convocation hall (or other venue

- of the demonstration). And this is because, as a matter of fact, each digit automatically yields its predecessor and its successor! And the children have merely to go on tossing off (or reeling off) the digits one after another (forwards or backwards) by mere mental arithmetic (without needing pen or pencil, paper or slate etc.)!
- v. On seeing this kind of work actually being performed by children, the doctors, the professors and other 'big-guns' of mathematics are wonder struck and exclaim: 'Is this mathematics or magic?' And we invariably answer and say: 'It is both. It is magic until you understand it; and it is mathematics thereafter'; and then we proceed to substantiate and prove the correctness of this reply of ours!
 - vi. As regards the time required by the students for mastering the whole course of Vedic mathematics as applied to all its branches, we need merely state from our actual experience that 8 months (or 12 months) at an average rate of 2 or 3 hours per day should suffice for completing the whole course of mathematical studies on these vedic lines instead of 15 or 20 years required according to the existing systems of the Indian and also of foreign universities."

Swami Bharti Krshna TirthaJi Maharaj

Intelligence Growth

1. Intelligence growth is essentially consciousness based.
2. Consciousness expresses itself as consciousness field within ‘mind’.
3. It is at the origin of consciousness field that intelligence values manifest themselves.
4. This manifested intelligence domain marks its physical presence in ‘brain’.
5. It is flow of intelligence as intelligence bits from brain to different organs of body, which is recognized as functional intelligence.
6. This whole process from emergence of consciousness field to actuated functions of body is the Phenomenon of ‘Jyoti’.
7. In the context of solar universe, Jyoti expresses itself as Parkash (light).
8. It is the Mathematics, Science & Technology of Sunlight, which that way becomes the Discipline of ‘Sunlight’ which formats consciousness field through sixth chakra of human body.
9. The format, organization and values of sixth chakra of human body is parallel to the format of hyper cube 6.
10. It is further parallel to the format, organization and values of Sun.
11. It is still further parallel to the values and virtues of Vishnu lok
12. As such it becomes the solemn duty of parents and teachers to help children to develop their intelligence growth in gentle steps.
13. And in a most natural way following the values of Ganita Sutras, of which first four namely Ganita Sutras 1 to 4 may be taken as the source of first phase growth steps for intelligence growth.

14. It becomes humble duty of each one of us to ensure that our children acquire intelligence growth in most natural way.

Intelligence growth

First phase

1. Intelligence growth is a sequential process.
2. It deserves to be approached phase wise.
3. First phase of intelligence growth is to avail format of Ganita Sutras 1 to 4.
4. The organization of Ganita Sutras as such is of many layers.
5. These layers are in compactified form.
6. These being in compactified form, same accordingly unfold sequentially.
7. Therefore the first phase of intelligence growth is to be approached as chase of five folds (Panchvritya) / (पंच-वृत्तयाः).
8. The four steps of intelligence growth shared already are of values
 - i. Counting (direct and reverse), with and without jumps. Counting with pebbles and sticks /points and lines
 - ii. Counting along all the ten directions.
 - iii. Working with a pair of lines, as angle, as parallel lines as one of the lines being fixed and other being in motion.
 - iv. Synthetic set up of objects and images / reflection operation
 As such, is just the first fold of the first phase of intelligence growth.
9. The second fold of first phase of intelligence growth would be of the format and values of arithmetic operations.
 - i. Counting, as addition and subtraction

- ii. Multiplication as repeated addition
- iii. Division as repeated subtraction
- iv. Reflection operation format for the organization of double digit numbers as under :

01 02 03 04 05 06 07 08 09

10 11 12 13 14 15 16 17 18

19 20 21 22 23 24 25 26 27

28 29 30 31 32 33 34 35 36

37 38 39 40 41 42 43 44 45

46 47 48 49 50 51 52 53 54

55 56 57 58 59 60 61 62 63

64 65 66 67 68 69 70 71 72

73 74 75 76 77 78 79 80 81

82 83 84 85 86 87 88 89 90

91 92 93 94 95 96 97 98 99

3

STEP-1 OF INTELLIGENCE GROWTH
ALONG FORMAT OF GANITA SUTRA-1

एकाधिकेन पूर्वेण ।
Ekadhikena Purvena.

By One More than One before

1. Prime aim of schooling is to achieve proper intelligence growth for innocent young minds.
2. Basic value of Ganita Sutras is that these in most affine way and as most sublime steps always remain parallel to the intelligence field growth within frame of Human mind.
3. Here it is for the attention of teachers and parents that the initiation step (s) for intelligence growth as per the values of Ganita Sutras (and Upsutras) surface as:
 - I. Learning of counting (as value of Ganita Sutra-1): 'एकाधिकेन पूर्वेण ।' / 'one more than before'.
 - II. Learning of direct counting $1, 1+1=2, 2+1=3$, to be supplemented by reverse counting as per the value of Ganita Sutra 14 (एकन्यूनेन पूर्वेण) / 'one less than before'.
 - III. Learning of direct counting as well shall be supplemented by counting by jumps as per the symmetry value of Ganita Upsutra-1 (आनुरूप्येण): $(1, 3, 5, \dots); (2, 4, 6, \dots), \dots$.
 - IV. The direct counting by jumps to be supplemented by reverse counting by jumps $(10, 8, 6, \dots); (11, 9, 7, \dots)$,
4. Further as per the value of simultaneous addition and subtraction of Sutra 7 'संकलव्यवकलनाभ्याम् ।', the counting skills shall be perfected by all types of counting steps of direct counting and reverse counting, with single, double are more jumps to be handled mentally.
5. To start with one shall remain at direct counting and reverse counting. At next phase direct counting with jumps and reverse counting with jumps be introduced. It is only thereafter that the mental processing of simultaneous addition and subtraction be introduced.
6. Young innocent minds have unbiased memory. As such above counting processes be introduced very gently. Once the values of these counting processes would stand absorbed

by young minds, the process of initiation of intelligence growth would take place of its own.

7. Parents particularly mothers during informal days of learning of children can attain wonders in his direction for their children.
8. During formal education the responsibility would be of teachers to attain all this for young minds.
9. The intelligence growth is a continuing process and same is of the steps parallel to values of Ganita Sutras 1 to 16 and Upsutras 1 to 13. As such parents and teachers shall help the children to memorize this small text.
10. Once this text stands memorized rest would be just a mental processing values Mathematics.

Let us recapitulate step 1 for intelligence growth.

- I. I. Direct counting (1, 2, 3, ----) Direct counting with jumps (1, 3, 5, 7, -----), (2, 4, 6, 8, -----)
- II. II. Reverse counting (---, 10, 9, 8, ---)
- III. Reverse counting with jumps (-----, 10, 8, 6, ---), (-----, 11, 9, 7, ---)

STEP – 2 FOR INTELLIGENCE GROWTH
 ALONG THE FORMAT OF
 GANITA SUTRA-2

निखिलं नवतश्चरमं दशतः ।

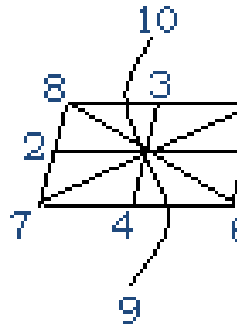
Nikhilam Navatascaramam Dasatah

All from 9 and the last from ten

- I. Transit from single digit values to double digit values (i.e. from (1, 2, 3, 4, 5, 6, 7, 8, 9) to (01, 02, 03, 04, 05, 06, 07, 08, 09)
- II. (01 and 10) constitute a reflection pair as 0 and 1 digits are swapping their places.
- III. Expose young minds to reflection pairs of double digit numbers like (01, 10), (02, 20), (03, 30), ---- (12, 21), (13, 31), ----
- IV. Transit parallel to transition from Sutra-1 format to Sutra – 2 format from single direction to ten directions set ups.
- V. It is the duty of the parents and teachers to very gently expose the young minds to ten directions set up. The start may be with east (iwoZ) and then to sequentially expose to west (if'pe) and so on. This exposure will set a proper directional frame for growth of intelligence for the young minds.

Recapitulation of step 2 of intelligence growth

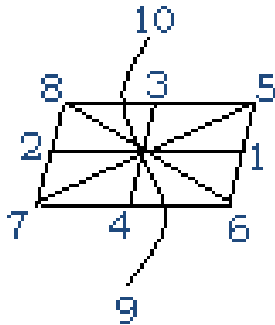
- I. Focus is to be given upon transition from numerals 1 to 9 to number 10.
- II. Further focus is to be given that double digit numbers on replacement of their digits make reflection pair of numbers like (01, 10), (02, 20), ---- (89, 98)
- III. Here it should be brought to conscious notice that difference of values of reflection pairs i.e. $10-01 = 09 = 1 \times 9$, $20 - 02 = 18 = 2 \times 9$, $30-03 = 27 = 3 \times 9$, --- are multiples of nine.
- IV. Here further young mind be exposed to ten directional set up for the space.



STEP – 3 FOR INTELLIGENCE GROWTH
 ALONG THE FORMAT OF
 GANITA SUTRA-3

□र्ध्वतिर्यग्भ्याम् ।
Urdhva tiryagbhyam
 Vertically and crosswise

I. The
 ten



focus of ten directional frame upon
 direction of single lines formats.

- II. As such for intelligence growth of young minds and to ensure that young minds are not getting mental blockade of the format of a line, here would be a phase and stage of exposure of the young minds of working with a pair of lines.
- III. It would be a transition step from Ganita Sutra 2 to Ganita Sutra 3.
- IV. The working with pair of lines shall be focused at the stage as a pair of orbs of an angle.

- V. The surface / area enclosed within pair of arms of an angle shall be helping young minds to get exposed to the set ups of surfaces.
- VI. Further working with pair of lines will help the young minds to transit from counting with the help of pebbles (points) to counting with the help of sticks (lines).
- VII. Sequentially pair of lines as parallel lines, as equal lines as unequal lines as angles as a vertical line and as diagonally (crosswise) line will mature the child for new values of intelligence.
- VIII. Thereafter one of the lines being fixed and other line in motion shall be helping reach at conics and all that.

STEP – 4 FOR INTELLIGENCE GROWTH
 ALONG THE FORMAT OF
 GANITA SUTRA-4

परावर्त्यं योजयेत् ।
Paravartya Yojayet
 Transpose and Apply

1. Vedic Systems accept mirror as a basic instrument for ‘reflection operation’.
2. Reflection is an independent operation.
3. Reflection operation is an additional Mathematical operation.
4. Reflection operation becomes the fifth arithmetic operation.
5. It becomes responsibility of parents and teachers to properly educate young minds about this reflection operation.
6. Better, reflection operation can be taught with the help of a mirror.
7. The features of reflection operation deserve to be distinctively exposed in reference to other four arithmetic operations, namely: (i) Addition operation (ii) subtraction operation (iii) multiplication operation (iv) division operation.
8. One way to teach to focus different operations of reflection operation is to handle it with the help of a pair of sticks (lines).
9. The pair of sticks may be designated as object stick (o stick) and image stick (I stick).
10. With its help the values 01 and 10 can be demonstrated for reaching at reflection pair of numbers (01, 10).
11. Further with it be demonstrated the reach at (01, 10) as ‘11’.

12. At next phase, mirror as synthesis glue / joint for objects and images, may be introduced.
13. Such synthesized set ups of objects and images to be chased again in terms of the values of counting as addition.
14. Further chase would be along place value format.
15. Still further chase would be as a pair of parts of whole.
16. Still further its chase is to be as a pair of faces of a surface.

Intelligence growth

Second phase

Step 1 Transition from 1 to 0

and back from 0 to 1

Recapitulation

1. The second phase of intelligence growth may be taken as centered around the comprehension of zero.
2. The first phase of intelligence growth, as such, may be taken as centered around comprehension of '1'.
3. For smooth intelligence growth, one shall very gently transit from comprehension of 1 to comprehension of 0.
4. For perfection of this transition, one shall equally, gently transit from the comprehension of zero to comprehension of one.
5. It is this two fold approach of transition from one to zero and from zero to one, which shall be helping enrich the intelligence growth process.
6. The intelligence, essentially is in the smooth transition formats.
7. The transition formats provide continuity.
8. It in a way shall be manifesting as features of relationships.
9. The gaps between two comprehension values would get bridged only in terms of the relationships of two values.

10. Pair of values together with their relationships would be making the intelligence range of the values.
11. It is this values range which shall be creating intelligence unit. These intelligence units as intelligence bits shall be in their collectivity creating intelligence field.
12. Therefore heavy responsibility lies upon the parents and teachers to very gently help young minds to enliven their intelligence field as their own creativity efforts of consciously bridging the gap of 1 and 0 and back from '0 to 1'.
13. It is going to be very big step towards the Phenomenon of intelligence growth for the young minds.
14. One shall ever remain conscious of this Phenomenon. It is in terms of it that take off takes place for the breakthrough from the discrete intelligence bits to continuous intelligence field zones.
15. The values of 0 and 1, may be worked out for comprehension of young minds and in terms of the same it may be demonstrated as to how differently these values behave.
16. Illustratively $0 + 0 = 0 = 0 - 0 = 0 \times 0 = (-0) \times (-0)$.
17. However $1 + 1 = 2$, $1 - 1 = 0$, $1^1 = 1 = 1 / 1 = 1^{-1} = 1^n = 1^{-n}$.
18. Further also that $0^1 = 0 = 0^1 = 0^n = 0^{-n} = 0 - 0 = 0 + 0$.

Intelligence Growth

Second phase

Step -2

Transition from 1 to 0

and back from 0 to 1

Bridging the Gap

1. Bridging the gap between the pair of values say (0) and (1), is all intelligence is about.
2. Young minds can be helped understand all about it for its appreciation and imbibing and in the process, of its own, acquiring intelligence.
3. One way to help the young minds to learn and comprehend this process would be to stand at a distance from a wall and throw a ball to strike the wall.
4. The place of standing be given the value '0' and the place of wall be given the value '1'.
5. Child be made conscious as that after the ball strikes the wall, it starts coming back and that all it is because of the wall.
6. The child be further made conscious that if wall would not have been there, then the ball would have gone ahead.

7. The child be further made conscious as that the point ahead of the wall (uptill which the ball would have reached in the absence of the wall) may be taken as value (2).
8. Child be further made conscious that the point uptill which the ball had returned because of the wall, can be attached value (2), taking into be that it is because of the absence of the wall
9. The placement of value '2' in between values 0 and 1 and the transformation of the triple (0, 1, 2) as (0, 2, 1) is big step of understanding and comprehension.
10. It is this comprehension which deserve to be emphasized.
11. In general it would be of the format $(n+0, n + 1, n + 2)$ transiting into $(n+0, n + 2, n + 1)$
12. This Phenomenon leads to a very rich format of features, sequentially young minds deserve to be exposed to the spectrum of values of this format.

Step 3

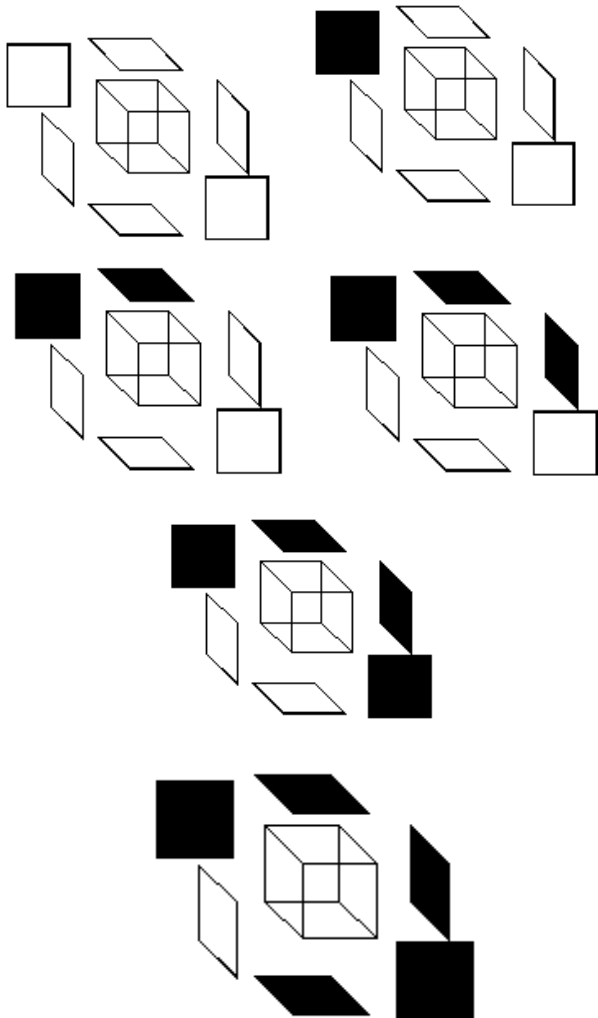
Completeness and incompleteness

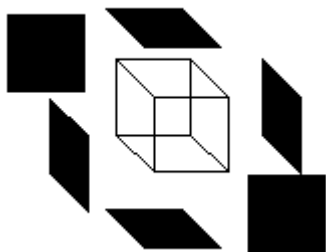
1. Completeness and incompleteness is the concept which deserve to be very gently exposed to young minds with the help of a line by striking out one of its point making a split for the line.
2. It should be emphasized as that even the single point of the line by its absence (removal) makes the completeness of the line and incomplete one.
3. It is this difference of single point which makes the completeness, and incomplete.
4. The void created by single point absence matters for the completeness / fullness of the line.
5. Like that the concept of completeness and incompleteness can be demonstrated by removal of a thread (line) from cloth (sheet) / surface.
6. The split of solid / cube with / in terms of the ‘inbetween surface’ would be another demonstration of completeness (vis-à-vis) incompleteness.
7. Close interval (interval with its both ends point intact as a complete set up will lead to incomplete set up by removal of even one of the end points of the interval which shall be making close interval into half close interval.

13. The concept of ‘completeness and incompleteness’, in reference to interval as above, that way shall be leading to three versions of interval namely (i) close interval with its both end point intact, (ii)

half closed interval with its only one end point intact, and (iii) open interval with its both end points missing.

14. The open interval, will permit its split into a pair of intervals, with one of them being the open interval and other being half closed / half open interval.
15. The concept can be demonstrated further in respect of surfaces /squares by demonstrated that there would be five versions of square namely (i) square with all the four boundary lines intact (ii) square with only three boundary lines intact (iii) square with only two boundary lines intact (iv) square with only one boundary line intact and (v) square with its all the boundary lines missing.
16. The presence of end points of an interval and of boundary lines of square, as such be taken as the signatures (presence of boundary components and in terms thereof the concept of version of square / geometry of 2-space may be introduced.
17. A step ahead the concept may be further demonstrated in reference to the set up of the cube being of 7 versions of 7 three space geometries of 6, 5, 4, 3, 2, 1, 0 versions / presence of the surface plates of the cube.





Intelligence growth

Third phase

Step 1

Unit, length and infinity of points

Recapitulation

1. First phase of intelligence growth avails (i) as arithmetic value (ii) phase second of intelligence growth avails values '0' as algebraic entity.
2. The present third phase of intelligence growth avails format of unit length as infinity of points.

Third phase

3. Young minds shall be very gently expose to value '1' as unit length and value '0' as single point.
4. Further unit length shall be chased as a set of infinity number of points.
5. It would be a static state for light as a set up of points.
6. Further line be taken as format of a moving point.
7. The coverage of line as a moving point is a feature which transits from static state of line as an infinity number of points to line as a track of moving point

8. It in a way transition from static state to a dynamic state.
9. One may have a pause here and make the young mind conscious of point as a zero space body in a dynamic state tracking as a 1-space body.
10. One may further have a pause here and the young mind be further made conscious of point as zero space body being the boundary component of line as 1-space body as domain accepting 0-space body at its boundary.
11. From this stage, young mind be very gently and in a sequential steps be exposed to 1-space body (line) being at the boundary of 2-space body / square.
12. Here, the young mind be further made conscious as that square / surface in its static state is a set of an infinite number of lines.
13. Further as that square / surface is a track of a moving line.
14. A step ahead young mind be exposed to surfaces being at the boundary of solids / cube / 3-space bodies.
15. Here as well young minds be very gently made conscious and expose to the static state and dynamic state of cube / solids / 3-space bodies.
16. A step further the static and dynamic state of 4-space bodies / hyper cube 4 being exposed with the help of cubes / solids / 3-space bodies.

Step 2

To knockout a point from unit length

1. Young minds shall be very gently exposed to the knocking out of a point from the unit length.
2. This may be demonstrated with the help of number of balls set adjacent to each other as a row.
3. Any ball of in between placement be very gently lifted out without disturbing the placements of the other balls of the row.
4. With the removal of one ball, the row would split as a pair of rows with the gap in between.
5. This split of a row into a pair of rows because of removal of one ball deserve to be comprehended well
6. Slowly the length of the original row be made large, and very large to symbolize it as an infinite row.
7. With its help, it be focused for the conscious attention of young mind that one infinite row split itself as a pair of infinite rows.
8. At this point of focus, the consciousness of young mind be further constructed upon the features as that line duplicate itself as a pair of lines, infinite line as a pair of infinite lines.
9. One may have a pause here and make the young mind further conscious as that how with removal of '1', infinity is leading to pair of infinites.
10. Here further very gently the young minds be further made conscious as that point as zero space body when knocked out of unit length, it makes unit length deficient of just a zero value point and still is capable of transforming infinity as a pair of infinites.
11. Here, further very gently, attempt be made that young minds start comprehending point / 0-space body / value '0' and line / 1-space body / value '1' acquiring identical formats and roles.
12. It is a very gentle exercise. It is a very delicate comprehension.
13. It is sublime step.

14. It is a virtuous growth of intelligence to handle 1 and 0 on identical formats and that too has a process of making infinity deficient of its single component.

Step 3**Part as a whole****To knockout a point from unit length**

1. Young minds deserve to be exposed very gently about the concepts of Equality and of being Big and Small.
 2. This may be demonstrated with the help of our popular symbol of equality (=).
 3. Here focused attention of young minds be made consciousness centric as that the symbol of equality avails a pair of parallel lines of equal length.
 4. One may have a pause here and make young minds further conscious of equality in terms of lengths of lines.
 5. Further here, it be demonstrated with the help of sticks as of lines formats of different lengths as that there exists big and small sticks (lines).
 6. One may have a pause here and have a fresh look at the set ups of lines.
 7. Every line is a set up of infinite number of points.
 8. Line, may be big or small, is a set up of infinite number of points.
-
18. One may shall further have a pause here and young mind be made conscious as that line may be big or small in terms of its length (s) but the same being always a set of an infinite number of points, so

infinity (number of points) being a unit shall be making each line big or small being equal as per the unit of infinite points.

19. This is a very delicate appreciation.
20. Its comprehension as well, as such, becomes equally delicate aspect.
21. Infact, here a pair of units are at work.
22. First unit at work is of length as a unit.
23. The second unit at work is of infinity number of points.
24. One may further have a pause here and to bring to the focused attention of young minds that when this concept is work further in the context of surfaces, it shall be bringing to focus parallel features.
25. Here in the context of surfaces, 'area unit' may be taken in place of the length unit in reference to lines.
26. One may have a pause here and bring to the pointed attention of young minds as that a line, how so ever big it may be is devoid of an area.
27. This being so line is accepting zero area value.
28. This zero area value of line, that way brings in second unit in reference to surfaces.
29. Infinite number of lines as a unit and unit area, that way gives us a pair of units for appreciation of set up of surfaces.
30. The unit area (howsoever small area may be) is going to be a set up of infinite number of lines (as infinite number of zero areas).
31. As such the surfaces may be big or small but each surface becomes a set up of infinite number of lines and as such become equal in reference to unit of infinite lines.
32. One may further have a pause here and to impress upon the young minds to extend the above pair of units approach to lines and surfaces to the solids as solids and surfaces.
33. One shall further have a pause here and to consciously make them of focused attention for working with a pair of units of two

consecutive dimensional bodies like (points, lines), (lines, surfaces), (surfaces, solids), (solids, hyper solids).

34. The concept of part being equal to whole, deserve to be comprehended well for its thorough appreciation and full imbibing for proper insight.
35. It is this insight imbibing, appreciation and comprehension of the concept of big and small parts still being equal in the context of the constituents of the previous dimensional bodies will provide a breakthrough for the intelligence growth and same deserve to be attained consciously.

Step 4**Part as a whole****Fractions of unit and
numerals of place value system**

1. Young minds shall be very gently exposed to fractions of a unit.
2. Unit shall be accepting double format.
3. As in case of a line, first format would be of length and second format would be of points.
4. To approach fraction of a unit, as such accordingly would be to avail a pair of formats.
5. Taking '10' as a unit and 1 to 9 as numerals of ten place value system, the concept of both of the formats standing satisfied in respect of it, is a very delicate aspect and concept.
6. Heavy responsibility lies upon the parents and teachers to expose young minds to the above aspects of above concept with very gentle steps.
7. One way would be to approach parts of the units as fractions.
8. In the context the second format of the unit in terms of constituent of the unit would takes us parallel to numerals of place value system.

9. Here would follow the concept of expression for the fractions in the format of equivalent decimal expressions.
10. Further, parallel to ten place value system, there would be number of situations of other place value system as well.
11. No doubt, it would be a very delicate approach require to work with all types of place value systems.
12. However once one comprehends well working with ten place value system, transition may be had for other place value system as well.
13. But this should be attempted one by one, say first of all one may shift from ten place value system to nine place value system then to eight place value system and so on.
14. Ganita Sutra 12 may help perfect the intelligence at this phase and stage of growth of intelligence.

Intelligence Growth

Fourth phase

1. We reach fourth phase of the intelligence growth steps.
2. This phase of intelligence growth as well is of four steps, namely:
 - i. Reach from the present stage to previous state as well as to the future state
 - ii. Unfolding of the existing state for its reach to previous state as a sequential reach.
 - iii. To have sequential increase of intelligence growth
 - iv. To intensify the intelligence growth.
3. These four steps of intelligence growth of the present fourth phase is parallel to Ganita Sutras 13 to 16 respectively.
4. The formats and working values of Ganita Sutras 13 to 16 may be availed for intelligence growth steps of the present phase.

First step

Reach from the present stage to previous state as well as to the future state

1. This step of intelligence growth as first focus upon the existing intelligence state.
1. It is only with proper evaluation of the existing state of intelligence that further steps can be planned.

2. To have evaluation of the existing state of intelligence, in itself is a very delicate exercise.
3. This being so, the parents and teachers undertaking the exercise to help young minds to have proper intelligence growth shall come up to the expectations of capacities to have evaluation of existing state of intelligence.
4. For it, one way would be to see the degree of success with which the child reaches back to the previous stage of learning.
5. It is the degree of ease with which the child can reach the previous stage of learning, the same shall be going to be the intelligence index of the child.
6. This way going sequentially back will provide a parameter for the intelligence index.
7. This parameter can be sequentially applied for going back and coming forward from the previous states to the existing state of intelligence.
8. It is this two fold approach of going back as well as coming forward, which can be availed for the ensured sequential progression for the intelligence growth.
9. The parents and teachers may expose the young minds to the format and values of Ganita Sutra 13.

Second step

Unfolding of the existing state for its reach to previous state as a sequential reach.

1. The reach from existence state, on its either side, that is towards previous state as well as towards future state, may appear to be of parallel formats and values but infact, it is not so.
2. This being so, heavy responsibility lies upon the parents and teachers accepting the responsibility to expose young mind in such a way that there is appropriate intelligence growth without any stretch upon the innocence of mind.
3. One way to initiate such exposure would be with the help of the format and values of a line / interval.
4. Going from one end of the interval to other end of the interval and the reverse reach from the second end of the interval to the first end of interval are of opposite orientations.
5. Taking first orientation as +1 and second orientation as (-1), we can explore the formats and values further.
6. +1 orientation is like a line which permits sequential progression as per the working rule 'one more than before' of Ganita Sutra 1.
7. The second orientation as such is also of line format but accepting sequential progression as per the rule (one less than before) formulation of Ganita Sutra 14.
8. For further comprehension and insight, let us revisit artifices pair (+1, -1).
9. Parallel to this artifices pair (+1, -1) is spaces pair (+1 space, -1 space).

10. For further insight let us revisit pair of spaces (+1 space, -1 space) in reference to their simultaneous roles as domain fold, dimension fold.
11. One may have a pause here and permit the transcending mind to continuously remain in prolonged sitting of deep trans and to glimpse the differences of values and virtues of +1 space as domain fold and -1 space as dimension fold of hyper cube 1, and in general in respect of hyper cube n.
12. The emerging delicate differentiating values and virtues formulation format of Ganita Sutra 1 deserves to be emphasized well.
13. For this need would be that above differentiation of format and values shall be visited and revisited time and again.
14. This way it is the proper comprehension, due appreciation, desirable imbibing only shall be enriching the insight about the steps of reaching back from existing state to the previous state.
15. Young minds shall be helped very gently with the help of formats, values and virtues of Ganita Sutra 1 and Ganita Sutra 14
16. Let young minds shall be made conscious and to be properly alerted as that +1 (space) leads to domain fold while (-1) space leads to dimension fold.
17. The young minds shall also be properly exposed the difference of +1 space and -1 space.
18. Parallel to it there should be proper exposure about the difference of +1 and -1 artifices which comes to be $(+1 - (-1)) = 2$.
19. Some hint may be given of transition from the order of linear order mathematics to spatial order Mathematics.

Third Step

**To have sequential increase
of intelligence growth**

1. Vridhi and Guna are two basic features. Young minds shall be very gently exposed to these conceptual terms / features.
2. One way to approach this pair of terms is to go parallel to features of addition and multiplication.
3. Addition leads to and avails formats and features of sequential progression as increase.
4. This, this way makes it parallel to a linear order.
5. The operation 'multiplication' leads to and covers a format of features parallel to 'powers'.
6. Vridhi and Guna as parallel to addition and multiplication may also be approached as addition at the base and addition at the index.
7. Further these can be respectively approached parallel to dimension fold progression and domain fold progression.
8. Here the concept term 'इत्' as well be introduced 'to remove'.
9. The term 'इत्' shall be very gently exposed with the help of 2-space / plane / surface within two dimensional frame.
10. It would be amounting to that 2-space set up is reduced into two dimensional frames.
11. The composite term 'xqf.kr' be approached as the set up being reduced to its constituents draft off properties.
12. It in a way would amount to reaching at the affine state of the constituents.

13. It is the collectivity of affine state constituent which be handled with perfection (of intelligence).
14. This phase and stage of intelligence growth handling affine state constituents with perfection makes the intelligence growth as well of perfection reach.
15. It is this perfection reach, with which affine state constituent can be handled is the attainment for the young minds being fulfilled with perfection state of intelligence growth.
9. Parents and Teachers can avail the format and features of Ganita Sutras 15 for such attainments for the young minds.

Fourth step

To intensify the intelligence growth

1. Here we reach last step of fourth phase of steps of intelligence growth along the formats of Ganita Sutras 1 to 16.
2. It may be recapitulated that the format and values of Ganita Sutras 1 to 15 have been availed uptill this phase and stage of steps for intelligence growth.
3. It may further be recapitulated that in the previous steps the format and values of Ganita Sutra 15 have been availed.
4. Ganita Sutra 15 text avails the basic formulation 'गुण'.
5. Ganita Sutra 16 text avails this formulation.
6. Ganita Sutra 15 text avails the formulation 'गुणित' while Ganita Sutra 16 avails the formulation 'गुणक'.
7. The format and values of Ganita Sutra 15 are the chase of virtue of affine status of the constituent of wholeness by reaching at wholeness being dreft of features (गुणा).
8. The present text of Ganita Sutra 16 avails the formulation 'गुणक' which as such leads to formatting of features 'गुण' within and as the set up of the first varga consonant 'क'.
9. The format values and features of letter 'क' are of the order of 'क ब्रह्मा' Ka Brahma and 'क शिव्' Ka Shiv

'क ब्रह्मा' Ka Brahma and 'क शिव्' Ka Shiv

10. 'क ब्रह्मा' Ka Brahma is of the format, values and virtues of Lord Brahma, the presiding deity of real 4-space which is of a spatial order.
11. 'क शिव्' Ka Shiv is of the format, values and virtues of Lord Shiv, the presiding deity of real 5-space which is of a solid order.
12. As such one may have a pause here and young minds be very gently exposed to this compactified states of manifested creations permitting transcendence therefrom from creator's space (4-space) to transcendental (5-space) space.
13. With it one shall further have a pause here and very gently expose them to this format of creations having transcendental base and making it of values and virtues of transcendence permissibility from spatial order creation format of 4-space to solid order transcendence range of the transcendental domains base of creation.
14. One may further have a pause here and permit the transcending mind to continuously remain in prolonged sitting of deep trans and to see that this reach from 4-space to 5-space, as such shall be leading us ahead to 6-space.
15. It is the achievement.
16. It is the attainment of the perfection of intelligence parallel to the format of organization of Ganita Sutras 1 to 16.
17. The above sequential order of reach from 4-space to 5-space and ahead from 5-space to 6-space shall be leading us back to the working rule of Ganita Sutra 1 'one more than before'.
18. With it the whole system becomes cyclic.
19. The original initiation as artifices of numbers now takes us to the dimensional frames / dimensionalised spaces.
20. It is in this way that the intelligence field starts intensifying itself.

21. This being so the sequential chase again from Ganita Sutra 1 to Ganita Sutra 16 shall now giving us a reach for the dimensional based.
22. Here at this second round, Ganita Sutras shall be approached simultaneously along with Upsutras.
23. Here it would be relevant to note that Ganita Upsutra 1 is of the format and values of symmetry / proportionality / of form as it is and it shall be adding to our intensity of understanding and insight of first round reach in terms of artifices of numbers (Sankhiya Nishtha) and second round of reach in terms of dimensional spaces (Yoga Nishtha).
24. With it parents and teachers shall discharge their solemn responsibility for helping their children and students to have proper growth of their intelligence and intelligence field to be fulfilled with transcendental values of consciousness states.

Fifth Phase

Intelligence Field

Dwitya Variti

द्वितीय वृत्ति

1. During प्रथम वृत्ति Parthma Vriti intelligence growth steps have been chased parallel to the formats and values of Ganita Sutras 1 to 16.
2. This chase had brought us phase to phase with the way Ganita Sutras 1 to 16 at phase and stage of Ganita Sutra 16 takes us back to Ganita Sutra 1 as a sequential continuity like that of circumference of a circle and the organization of Ganita Sutras as such becomes of cyclic features.
3. Accordingly the attainment of intelligence growth of above steps attains perfection of cyclic features of sequentially intensifying itself as intelligence field of the set up of sequential cyclic phases.
4. It is like the surface permitting chase as concentric circles.
5. The second round of chase of intelligence growth, as such becomes the chase of intelligence field. During the first round of chase of intelligence growth the help was

taken of the formats of artifices of numbers being the mathematical entities.

6. During present second round of chase of intelligence growth as intelligence field is to avail the dimensional frames has mathematical entities.
7. Here it would be relevant to note that to establish processing processes of Vedic Systems are (1) Sankhiya Nishtha and (2) Yoga Nishtha.
8. Sankhiya Nishtha avails artifices of numbers presuming the existence of dimensional frames.
9. Yoga Nishtha avails dimensional frames presuming the existence of artifices of numbers.
10. With it, the second round of chase of intelligence growth as intelligence field, that way goes to the base of artifices of numbers.
11. This geometric base is to be approached as sequential organization of dimensional frames.
12. Ganita Sutra 1, as such in terms of its working rule 'one more than before', that way takes us from 1-space to 2-space and further from the role of 1-space as dimension to 2-space with the role of dimension.
13. Here it also would be relevant to note that to intensify the intelligence growth, Sutras are going to be of great help.
14. As such, the sadkhas shall simultaneously chase Ganita Sutra 1 and ganita Upsutra-1, the working rule one more than before of Ganita Sutra 1 together with the working rule of symmetry / proportionality / following the form as it is, together shall be providing the desired breakthrough and

initiation for intensifying the intelligence growth and the smooth evolution of the intelligence field.

15. One shall sit comfortably and permit the transcending mind to continuously remain in prolonged sitting of deep trans to simultaneously workout Ganita Sutra 1 and Ganita Upsutra 1 and acquire proper insight of initiation of evolution of intelligence growth.

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SECTION - 03

VMS & T Conceptual Statements

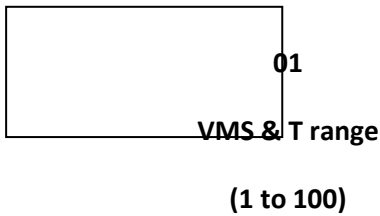
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VMS Conceptual statements

01

VMS & T range

(1 to 100)



1. Values of VMS & T transcend the individual values of mathematics, sciences and technologies and unifies them as values formats.

2. Chase range of Vedic mathematics, Science & Technology is from Earth to Sun and beyond that from Surya Mandal to Brahmand.
3. The first phase of VMS & T coverage is of values of 'solar universe' while the second phase of VMS & T coverage is of the values of 'Brahmand'.
4. VMS & T approaches solar universe as real 6-space, while Brahmand is approached as real 9-space.
5. Artifices pair (6, 9) which permit re-organization as (3+3, 3 x 3), ultimately have a reach for as artifices pair (26, 28); 26 elements range for coverage of Earth to Sun and this range of dimensional order taking ahead uptill the domain of this dimensional order.
6. One way to view it would be a reach from values format of first perfect number (6) to second perfect number (28).
7. Other way to view it would be a reach from 'Sun' as sixth element as domain fold to 'Air' as fourth element as dimensional order of potentialities of Transcendence from space (being the fifth element) of placement in between 'Sun and Air'.
8. One other way to view it would be to have a sequential reach, firstly along format of real 6-space and secondly along the format of Transcendental 9-space.

Real 6-space

9. Real 6-space is of creative dimensional order (4-space) as dimension.
10. Within creator's space (4-space), hyper cubes 6 is manifested printout of 6-space

11. Hyper cube 6 is a four fold manifestation layer of dimensional contents of quadruple spaces (4, 5, 6, 7) within 4-space.
12. Domain fold of hyper cube 6 is printout of 6-space content within 4-space.
13. With Transcendence at the origin of 4-space (which is a seat of Transcendental source origin / 5-space plying the role of origin of 4-space), the printout of 6-space content as domain fold of hyper cube 6 in 4-space, shall be unfolding its Transcendental features and ahead these Transcendental features shall be taking us to self referral state, unity state, natural order and existence values of Brahmand.
14. The reach uptill 6-space as a six fold range (Earth, Water, Fire, Air, Space, Sun) with 6-space being of a creative dimensional order (4-space in the role of dimension) and Transcendental carriers coming into play with Transcendence at the Transcendental origin of creator's space (4-space), as such, on its chase shall be leading us to and for transition from creative dimensional order (4-space in the role of dimension) to Transcendental dimensional order (5-space in the role of dimension)

Transcendence through manifestation

15. Manifestations are responsible for mental blocks. It is only by way of Transcendence through manifestation that mental blocks can be dissolved.
16. Transcendence format is the basic format of VMS & T. This format is extended format of four fold manifestations. With acquisition of fifth fold, the four fold manifestation format transits and transforms into five fold Transcendence range.
17. Along artifices of numbers, while four fold manifestation format is going to be of features parallel to the artifices of

number 4, likewise the features of five fold Transcendence range are parallel to the format of artifices of number 5.

18. The manifestation phenomenon, as such is the phenomenon of 4-space and the Transcendence phenomenon is the phenomenon of 5-space.
19. With hyper cube 4 being of manifested domain of 4-space content and as such manifestation is of the format of hyper cube 4, while the Transcendental is of the format of hyper cube 5.
20. The creator's space (4-space) being of Transcendental origin (5-space as origin) and 4-space being of a spatial dimensional order and 5-space being of a solid dimensional order, as such the Transcendence through manifestations becomes of format, features, values and virtues of transition from spatial order to solid order

Transcend half

21. The Transcendence phenomenon, as such, because of the spatial order of 4-space shall be simultaneously bringing into a pair of working units, namely '2 as 1 and 1 as 2'.
22. Linear sequencing of numbers as per the rule 'one more than before, that way shall be taking from number '4' to number 5, it shall be availing only one of the pair of axes of the spatial dimensional order of 4-space. As such Transcendence from artifice 4 to artifice 5 as such is going to be of the format and features of 'transcend half'.
23. Further as solid order '3-space in the role of dimension itself being of a three linear axes frame and the three dimensional frame accepting a split into the pair of three dimensional frame of half dimensions would deserves to be chased.
24. Each linear axes as a dimensional order shall be manifesting a sold domain (a three dimensional domain) and as such triple

axes shall be leading to artifice value $3 \times 3 \times 3 = 27$, which is a step ahead of the values format of artifice 26.

25. And, geometric set up of cube, the representative regular body of 3-space, as 3-space domain fold of hyper cube 3 is a set up of 27 components (8 corner points, 12 edges, 6 surface, 1 volume)
26. And further the acceptance of the existence of origin of 3-space with seat at the center of the cube, as an additional geometric component of the set up, shall be taking us to the set of 28 components for the set up of cube.
27. And still further the availability of a three dimensional frame for manifestation format for cube within 4-space shall be making it a set up of 31 components and thereby this set up to play the role of a solid dimensional order for the Transcendental origin of creator's space (4-space).
28. The rule 'transcend half', as such shall be because of and as a result of the split of dimensional frames within creator's space (4-space) into a pair of dimensional frames of half dimensions because of the spatial order of 4-space.

Chase of square within a cube

29. One way to chase of a square within a cube is to accept square as a set up within a two dimensional frame of a pair of linear axes.
30. This as such shall be bringing us face to face with the set up of a two dimensional frame being of a pair of two dimensional frames of half linear dimensions (linear axes)
31. One may have a pause here and take note that 2-space, in fact, is a of a zero dimensional order, that is as that zero space plays the role of dimension of 2-space, and as such two dimensional frame shall be a set up of pair of dimensions of zero order (0-space as axis).

32. However the chase of a square within a cube, as above, amounts to transition and transformation for zero dimensional order of 2-space into a linear dimensional order for the set up of a square within a cube, this transition and transformation of the order of dimensional frames deserves to be chased well by proper comprehension and appreciation to have full insight about the geometric set ups formats within different domain folds.

Split of dimensional frames into

pairs of dimensional frames

33. The split of a two dimensional frame of a pair of axes into a pair of dimensional frames of half dimensions deserves to be chased in terms of simultaneously available a pair of working units '2 as 1' and '1 as 2' within creator's space (4-space).
34. The simultaneously available a pair of working units '2 as 1 and 1 as 2' within creator's space (4-space) because of its spatial dimensional order, as such shall be bringing us face to face with the features like part as a whole, which is no more available within order set ups for which there is hard rule as that '1 is 1'.
35. The feature of part as whole, shall be making 'half' as full' and thereby the pair of dimensional frames of half dimensions, as such shall be of the values formats of 'full dimensions' whereby the phenomenon of split of a dimensional frame would emerge to be the phenomenon of a dimensional frame multiplying itself into pair of dimensional frame within creator's space (4-space) of spatial dimensional order.
36. Parallel to it, along and in terms of artifices of numbers, the above split phenomenon because of the simultaneous availability of a pair of working units '2 as 1' and '1 as 2' shall be leading us to '1/2 as a unit'. However while accepting $\frac{1}{2}$ as

a unit, as a working unit, one is to ever remain conscious as that the working format is of 4-space which is of a spatial order and the same is different than that of 3-space which is of a linear order where '1 is 1' and it is not permissible to take and work with '2 as 1' and '1 as 2'.

37. The split of a three dimensional frame into a pair of three dimensional frames of half dimensions in 4-space, as such shall be bringing into the $1 \frac{1}{2}$ as a working unit for chase of solid order within creator's space (4-space) only, as here in this spatial order space, $1 \frac{1}{2}$ may acquire the value '3' being double of $1 \frac{1}{2}$.
38. One may have a pause here and take note that the above features of spatial order infact are accepting dimensions / axes being 'unit' and as such n dimensional frame of n-space are the setups of n dimensions, with each dimension being a unit. It in a way is not distinguishing while working with dimensions of dimensional frames of different spaces, as to the order of the dimension itself of the dimensional frame illustratively 3-space has three dimensions, 4-space has four dimensions and like that n-space has n dimensions and while working with the dimensions, may it be of 3-space or of 4-space or of any space, the same is to be taken as of same unit value. However in the process the order of the dimension is being sacrifice by accepting it and equating it with a 'linear dimension' (of 3-space) while 4-space of spatial dimensional order, 5-space is of solid dimensional order and so on.

Dimensional orders of dimensions

39. Dimensions are domains but in the role of dimensions and as such dimensions have their own dimensions as well.
40. The concept of dimension of dimension is the basic concept of VMS & T which infact helps transcend through manifestation

and to have a Transcendence at the origin fold of the manifestation and to have a reach at the base of the origin fold, as the fifth fold.

41. Firstly attainable by the rule of Transcend half and then by the rule of '2 as 1 and 1 as 2' to achieve full transcendence into the Transcendental base manifested by Transcendental domain (5-space as domain).
42. The four fold manifestation is the phenomenon of simultaneous manifestation of space content of four consecutive dimensional spaces.
43. This as such also brings into focus, four different roles of each space as the space content shall be of the features and values of manifesting any of the four folds of the manifestation layers within creator's space (4-space).
44. These four fold features of the space content to manifest as dimension fold, boundary fold,, domain fold or origin fold, as such infact can be taken as four different roles of the space content within 4-space
45. Therefore n-space playing the role of dimension fold of manifestation layer (n, n + 1, n +2, n + 3) / hyper cube n + 2, that way shall be making n-space in the role of dimension fold of n + 2 space and n space itself as domain fold of hyper cube n shall be leading to (n-2) space in the role of its dimension. The triple (n-2, n, n+2) as such shall be making n-2 space being the dimension of dimension of n+2 space. This feature of a reach from dimension to dimension of dimension shall be leading us to linear equivalence for the dimensional orders of 4-space being $4 \times 2 = 8$ of 5-space being $5 \times 3 = 15$, of 6-space being $6 \times 4 \times 2 = 48$, of 7-space being $7 \times 5 \times 3 = 105$ and so on.
46. One may have a pause here and take note that while the dimension fold is not taken to its dimensional order, then as has been pointed out above, 3-space dimensional frame is worked out simply as of three dimensions, four, the dimensional frame of 4-space, simply as 4 dimensions and so on, however when dimensions are taken to their dimensional order then three

dimensional frame takes us to $3 \times -1 = -3$, while 4-space dimensional frame takes into $4 \times 2 = 8$ and so on.

Dimensional synthesis values

47. VMS & T chases dimensional synthesis phenomenon as well and chases dimensional synthesis values. The mathematics of dimensional synthesis values leads us to existence reality as to how while the pair of dimensions structure out domain fold while triple dimensions (of any order) always reach at the same value '6'.
48. Further as that non negative dimensional orders (3, 4, 5, 6) uptill synthesis of 7 dimensions exhaust themselves for attaining positive values
49. Dimensional order 3 (3-space in the role of dimension) attains values 0 with synthesis of 7 dimensions, while dimensional order 4 (4-space in the role of dimension) attains value 0 with synthesis of 5 dimensions and dimensional order 6 (6-space in the role of dimension) attains value 0 with synthesis of 4 dimensions only. However dimensional order 5 never attains value 0 but synthesis value of 3 dimension is positive while the synthesis value of four dimension is negative and that way 0 value is jumped over in between.
50. The above features focus upon quadruple dimensional orders (solid and hyper solid – 4, 5 and 6 orders) as such focuses upon the four fold manifestation layer (3, 4, 5, 6) of hyper cube 5 as the coordination format for all the four dimensional orders.
51. It is this coordination of quadruple dimensional orders in terms of respective quadruple dimensional spaces contents, manifesting together along the format of hyper cube 5, which, that way comes to be the central focus for the organization format.

52. The dimensional synthesis values tabulation given below is for pointed attention and its comprehension and appreciation of the focus upon the quadruple dimensional orders:

-4	-2	6	20	40	66	98
-3	-1	6	18	35	57	84
-2	0	6	16	30	48	70
-1	1	6	14	25	39	56
0	2	6	12	20	30	42
-1	-1	0	+2	+5	+9	+14
+1	+1	0	-2	-5	-9	-14
1	3	6	10	15	21	28
2	4	6	8	10	12	14
3	5	6	6	5	3	0
4	6	6	4	0	-6	-14
5	7	6	2	-5	-15	-28
6	8	6	0	-10	-24	-42

53. The pair of rows dotted lines above give the working rule of reaching at the values in the respective columns. The values of the lower row are to be availed for reaching at the values of the

rows of values beneath the above pair of lines, while the values of the upper row between the lines are to be availed for reaching at the values of the rows above the above pair of lines. For pointed attention the above pair of rows between the above pair of lines are being reproduced here under for pointed attention for the computation rule of the above table:

↑	-1	-1	0	+2	+5	+9	+14
↓	+1	+1	0	-2	-5	-9	-14

54. Illustratively the working rule for reaching at the values of dimensional synthesis of single, double and triple and further number of dimensions say of order '1' is to worked out by respectively adding the values of the lower row of inbetween the above pair of lines respectively with the values of 0 dimensional order synthesis values which are as under:

Step 1 to write down the values of 0 order

0 2 6 12 20 30 42

Step 2 write down the values of the lower row between the pair of lines.

+1 +1 0 -2 -5 -9 -14

Step 3 Add column wise the values of step – 2 to values of step 1 and reach at the synthesis values of dimensions of order 1

0	2	6	12	20	30	42
+1	+1	0	-2	-5	-9	-14

1	3	6	10	15	21	28

55. Now if the values of order 2 are to be reached at then the values of order 1 are to be added column wise with the values of the lower row referred above as under:

1	1	6	10	15	21	28
+1	+3	0	-2	-5	-9	-14

2	4	6	8	10	12	14

56. Likewise the subsequent orders values as well can be reached at by the parallel steps.

57. Now for reaching at the values of 0 order, the values of upper row between the lines are to be added column wise with the values of order 1 as under

-1	-1	0	+2	+5	+9	+14
1	3	6	10	15	21	28

0	2	6	12	20	30	42

58. Likewise the values of order -1 can be reached as

-1	-1	0	+2	+5	+9	+14
0	2	6	12	20	30	42

-1	-3	6	14	25	39	56

59. And the further orders in that sequence as well can be reached as likewise by parallel steps.

60. The above tabulation of dimensional synthesis values also deserves to be chased attended to with pointed focus upon the sequential values of synthesis of 0 dimensional order viz. (0, 2, 6, 12, 20, 30, 42, ---). It shall be bringing to pointed attention that sequential increase at each step as well is of sequential format of values (2, 2+4, 2 + 4 + 6, 2 + 4 + 6 + 8, ---) parallel to which is the summation values sequence of boundary components of hyper cube 1, boundary components of hyper

cube 1 + boundary components of hyper cube 2 + boundary components of hyper cube 3, and so on.

Pure and applied values range

of dimensional synthesis values

61. Mathematics of dimensional synthesis is branch of the Discipline of Vedic mathematics, Science & Technology.
62. The reach of dimensional synthesis values is of big range as pure values, as well as applied values.
63. From the settlement of the path of Transcendental carriers within solar universe and even beyond there to uptill pole star as its unity state origin source reservoir and even beyond thereto is one range of pure and applied values.
64. The settlement of the path of Transcendental carriers along the format of sequential measuring rods is one application of the mathematics of dimensional synthesis values.
65. The seed to seed systems of 'tree' is one another range of applications of the mathematical of dimensional synthesis values.
66. The coordination in terms of Shad Chakras of nerves system as per the sushmana nadi, the flow organization format of the nervous system is one another range of applications of the mathematical of dimensional synthesis values.
67. The parallel formats of measuring rods for the domain folds and boundary folds is one another application of the mathematical of dimensional synthesis values. Like that there is a very wide range of applications of dimensional synthesis values in terms of which proper comprehension of the existence phenomenon within solar universe and beyond, the existence phenomenon within frames and without frames as

that of trees, birds, animals, human beings and so on, as well can be reached in terms of the dimensional synthesis values.

Specific features of

Individual dimensional orders

68.

- i. Linear order (1-space in the role of dimension / order '1'), sequentially leads us to values range (1, 3, 6, 10, 15, 21, ---).
- ii. This values range accepts re-organization as (0+1, 0+1+2, 0+1+2+3, 0+1+2+3+4, --).
- iii. This feature of this range of values, that way shall be distinguishing linear order (1-space in the role of dimension / order '1') from other orders.

69. Spatial order

- i. Spatial orders (2-space in the role of dimension / order '2') leads to sequential values range (2, 4, 6, 8, 10, ---).
- ii. This range accepts re-organization as '1 x 2, 2 x 2, 3 x 2, 4 x 2, ----'.
- iii. This is parallel to the sequence of boundary components of hyper cubes 1, 2, 3, 4, ----.
- iv. This way this feature distinguishes spatial order from other dimensional orders.

70. Solid order

- i. Solid order (3-space in the role of dimension / order '3') leads to the values range (3, 5, 6, 6 5, 3, 0, ---)
- ii. The feature, as per the values range (0, 3, 5, 6, 6 5, 3, 0) is of parabolic format

iii. The range of this parabolic format (0, 1, 2, 3, 4, 5, 6, 7) / (range of dimensional synthesis values of synthesis of (0, 1, 2, 3, 4, 5, 6, 7) number of dimensions distinguishes order 3 from other dimensional orders

71. Creative dimensional order

- i. Creative dimensional order (4-space in the role of dimension / order 4) leads to synthesis values range (4, 6, 6, 4, 0, ---).
- ii. The synthesis values range (0, 4, 6, 6, 4, 0) is of parabolic format of range (0, 1, 2, 3, 4, 5) / synthesis of 0, 1, 2, 3, 4, 5 number of dimensions of order 4. This feature of creative dimensional order (4-space in the role of dimension / order '4') distinguishes itself from other dimensional orders. Particularly the length of parabolic range focuses upon the distinguishing features of creative dimensional order from other dimensional orders.

72. Transcendental dimensional order

- i. Transcendental dimensional order (5-space in the role of dimension / order 5/ leads to synthesis values range (5, 7, 6, 2, -5, --)
- ii. This range, as such focuses upon the feature as that the synthesis of four dimensions of order 5 lead to positive value while the synthesis of five dimensions lead to negative value, and that way, this becomes the distinguishing feature of Transcendental dimensional order (5-space) in the role of dimension / order 5.
- iv. Here it also would be relevant to note that the synthesis value of four dimensions of this order is '2', while the synthesis value of five dimensions is '-5'.
- v. One may have a pause here and take note that the creative manifestation layer (2, 3, 4, 5) of hyper cube 4 is of spatial dimensional order and origin.

- vi. Further it also would be relevant to note that 3-space plays the role of boundary of 4-space / hyper cube 4
- vii. Still further it also would be relevant to note that 2-space plays the role of boundary of 3-space / cube / hyper cube 3, and that within cube / 3-space, surface as two faces of opposite orientations parallel to which is the artifices pair (2, -2)
- viii. Still further it also would be relevant to note that the manifestation layer (-5, -4, -3, -2, / hyper cube (-3, is of Transcendental order (-5) while origin is (-2).
- ix. One may have a pause here and take note that the Transition from synthesis value '2' of four dimensions of order '5' to synthesis values (-5) of synthesis of 5 dimensions of order '5' is because of the shift from first phase of surface (parallel to value '+2' to second phase of surface (parallel to value '-2').
- x. One shall sit comfortably and permit the transcending mind to continuously remain in prolonged sitting of trans and to comprehend and appreciate above distinguishing features of Transcendental dimensional order.

73. Self referral order

Self referral order (6-space in the role of dimension) / order 6 is of the distinguishing feature as that the synthesis of four dimensions lead to value '0'.

74. Unity order and beyond

Unity order (7-space in the role of dimension) / order 7 and all higher orders, namely order 8, order 9 and so on accept common synthesis value for synthesis of 3 dimensions as '6' and from synthesis of four and higher dimensions, the synthesis values for these orders range (order 7, order 9, ---) is negative.

Non positive dimensional orders

75. The dimensional orders (order 0, order '-1', order '-2', -- are the non positive dimensional orders.
76. Non positive dimensional orders as well, individually distinguish themselves from each other, as well as from positive dimensional orders as well.
77. Distinguishing features
- The distinguishing feature of non positive dimensional orders is that in their values ranges, every step there is increase of value parallel to the value of dimension of that order.
 - Illustratively in case of order '0', there is increase of value '2' at every step of the range of values of order '2'
 - Further in case of order '-3', there is in increase of value 3 as absolute value of '-3' at every step of the range of values of order '-3'
 - Likewise in case of order '-n', there would be increase of value 'n-2' at every step of the range of values of order '-n'.
78. Features of order (0)
- Synthesis values range of order '0' is '0, 2, 6, 12, 20, 30, ---'.
 - This values range accept re-organization as '0, 0+2, 0+2+4, 0+2 +4+6, --- .
 - It would be relevant to note that increase at each step is of value in the sequential order '2, 4, 6, 8, ---'.
 - The sequential values range '2, 4, 6, 8, ---' accepts re-organization as (1 x 2, 2 x 2, 3 x 2, 4 x2, ---'
 - It would bring to focus that multiplier for the sequential increase value is at every step being '2'.
 - It would be relevant to note that the multiplier value '2' is parallel to the value of 2-space as domain of order '0' (0-space in the role of dimension)
 - As such it becomes a catch rule that the multiplier for sequential increase at each step is parallel to the value of the domain fold of the dimensional order at work.
79. Dimensional order '-1'
- The domain fold of dimensional order '-1' is '-3' space.

- ii. The value parallel to domain fold here is '3'.
 - iii. As such the multiplier for sequential increase at each step for the synthesis value of the range of dimensional order (-3) comes to be '3'.
 - iv. It would be blissful exercise to be face to face with the above multiplier value '3' playing its role in the reach of dimensional synthesis values range of dimensional order (-1) which comes to be: 1 6 14 25 39 56 --
 - v. Here It would be relevant to note that the above range accept re-organization as
 $1, +1 + 5, +1 +5+(5+3),$
 $+1+5+ (5+3) + (5+3+3) + \dots$
 - vi. One can immediately notice the role of multiplier 3 in above range of synthesis values from the stage of synthesis of 4 dimensions onwards.
80. Multiplier '4' for dimensional order '-2'
 It would be blissful exercise to notice the rule of multiplier '4' for the range of synthesis values of dimensions of order '2' from the stage of synthesis of four dimensions onwards, which comes to be the range of values: -2, 0, 6, 16, 30, 48, 70

Working rule of values of synthesis of n dimensions of all dimensions of orders

- 81. It would be pertinent to mention that the working rule of values of synthesis of n dimensions of all dimensions of orders is provided by the difference of values of synthesis of n dimensions of order '1' over the values of synthesis of 'n dimensions of order '2'.
- 82. The synthesis value of n dimensions of order 1 comes to be the summation value of 1 to n = $n(n+1) / 2$
- 83. The synthesis value of n dimensions of order 0 comes to be 2n.
- 84. The difference of above two values comes to be

$$\begin{aligned}
 & [n(n+1)/2] - (2n) \\
 &= [n(n+1) - 4n]/2 \\
 &= [n^2 - 3n]/2 \\
 &= n(n-3)/2
 \end{aligned}$$

85. It would be relevant to note that the above value is parallel to half of the number of coordinates of (n-3) (parallel to n-3 space plying the role of dimension) x n (parallel to n space playing the role of origin)
86. This feature deserves to be comprehended well.
87. For values of n= 4, 5, 6, 7 ----, the above formulation $n(n-3)/2$ shall be
- i. For 'n = 4', value is '2'
 - ii. For 'n=5' value is '5' = 2 + 3
 - iii. For n = 6 value is '9' = 2 + 3 + 4

and so on.

88. It would be blissful to reach at the sequential range of values of synthesis of four dimensions of all dimensional orders
89. Likewise it would be blissful exercise to reach at the sequential range of synthesis values of dimensions 5, 6, 7 onwards for whole range of dimensional orders

Focus upon the role of

Transcendental dimensional order

90. The mathematics of dimensional synthesis as such focuses upon the prominent role of Transcendental dimensional order (5-space) in the role of dimension / order 5.
91. Parallel to it comes in focus the features of the Transcendental domains (5-space content manifesting as domain fold of manifestation layer of hyper cube 5).
92. With it real 5-space comes in focus.

93. Parallel to it artifices 5 comes in focus
94. This, that way brings to focus the format of pentagon.
95. Pentagon is first polygon whose internal diagonal lead to construction of internal pentagon
96. This feature of pentagon leading to internal pentagon, that way is an ad-infinitum feature. This ad-infinitum feature of center of the pentagon being the limit of ad-infinitum pentagons..
97. Center of the pentagon as the limit collapsing state of pentagons and making it a collapse seat of the vertices of the pentagon deserves to be chased in the light of the feature of Transcendental dimensional order (5-space in the role of dimension / order 5, which leads to synthesis value for 4 dimensions as '2' and for synthesis of 5 dimensions the value '-5'.
98. To blissfully glimpse synthesis value of 4 dimensions to synthesis value of 5 dimensions and to have an insight of the phenomenon of Transcendence taking place at the center of pentagon and with the attainment of Transcendence from first phase of surface of pentagon to the second phase of pentagon and thereby the attainment of the value '-5', shall be that way leading us to the working format of pentagon of negative orientation being available along the format of second phase of the surface of the startwith pentagon
99. It would be very blissful to continuously remain in prolonged sitting of trans and to be face to face with this Transcendental phenomenon.
100. One shall continuously glimpse this Transcendental phenomenon to melt one's mental blocks because of the manifestations formats.



VMS Conceptual statements

02

Chase of Transcendental domain

(101 to 200)

02

Chase of Transcendental domain

(101 to 200)

101. Amongst others, the prominent features of Transcendental domain comes to be as that ‘Transcendental domain manifests as domain fold of hyper cube 5, and as such its measuring rod is synthesized by hyper cubes 0 to 5 and with it, it becomes a domain formatting five fold Transcendence range.;
102. This way Transcendental domain distinguishes itself from creative domain as that the creative domain permits chase in terms of a measuring rod synthesized by hyper cubes 0 to 4 while Transcendental domain permits its chase in terms of measuring rod synthesized by hyper cubes 0 to 5.
103. The measuring rod of Transcendental domain (5-space content manifesting as domain fold) settles the path of Transcendental carriers for simultaneously carrying the pair of consecutive four fold manifestation layers.

104. It is this feature of the Transcendental carriers along the Transcendence path settled by a measuring rod synthesized by hyper cubes 0 to 5, deserves to be chased well as that with its proper appreciation, deep insight can be had about the format and features of Transcendental domains
105. Further amongst others, the different roles of 5-space as well deserves to be chased well as in terms of these rules of 5-space as dimension fold, boundary fold, domain fold, origin fold and as base of the origin, proper insight can be had about the inner features of Transcendental domains as well.
106. The features of these five fold rules of 5-space as dimension fold, boundary fold, domain fold, origin fold and base of origin fold permit for their expressions, a 5 x 5 format as under:

1	2	3	4	5
2	3	4	5	6
3	4	5	6	7
4	5	6	7	8
5	6	7	8	9

107. Amongst others the above format is availing the range of 1-space to 9-space for expression of features of Transcendental domain in its different roles along 5 x 5 format.
108. The 5 x 5 format as 5 x 5 grid zones shall be leading to 4 x 4 = 16 Transcendence streams at the centers of 4 x 4 = 16 grid zones of 5 x 5 matrix format
109. One may have a pause here and take note that the artifice values 9 x 25, 16 parallel to above format features, constituted triples (9, 25, 16) which permit re-organization as (3 x 3, 5 x 5,

4 x4) and the triple artifices (9, 25, 16) get coordinated as $9 + 16 = 25$ along the right angle triangle triple format (3, 5, 4).

110. One may have a pause here and note that above organization features are parallel to organization features of Devnagri alphabet of 9 vowels, 25 varga consonants and 16 other letters (4 anthstha letters, 4 ushmana letters and 8 yama letters)

111. One may further have a pause here and take note that 16 above referred letters parallel to 16 Transcendence streams at the centers of 16 grids of 5 x 5 matrix format parallel to 5 x 5 varga consonants, shall be leading to Transcendental code values as under:

- i. The Transcendental values for four anthstha letters being of format and features of quadruple artifices (1, 3, 5, 7) which is parallel to the sequential dimensional order range as 1-space in the role of dimension of 3-space, 3-space in the role of dimension of 5-space and 5-space in the role of dimension of 7-space
- ii. the Transcendental code values of four Ushmana letters are parallel to quadruple artifices values (2, 3, 6, 9) which is parallel to the Transcendence flow along the second axis of the spatial dimensional order of creator's space (4-space).

Here it would be relevant to note that

- a. the first value '2' presumes existence of first axis, while the transcendence is to take place along the second axis
- b. The artifice value $3 = 1 + 2$, in a way amounts to the value of next sequential step. Here the simultaneous availability of pair of working units '2 as 1 and 1 as 2'.
- c. The next step value $(6) = 1 + 2 + 3$, is a sequential step value in continuity of the previous step value
- d. The final step value '9' $= 2 + 3 + 4$ is attainable as the second sequential step value, in reference to the previous first sequential step value $6 = 1 + 2 + 3$

iii. Transcendental sequential values of 8 yama values come to be (9, 10, 11, 12, 13, 14, 15, 16)

Here One may have a pause here and take note that the first yama letter, namely Anuswara, acquires Transition and transformation into last varga consonants, namely makara, which is of Transcendental code value '9' and as such the sequential range of Transcendental code values for 8 yama letters coming to be (9, 10, 11, 12, 13, 14, 15, 16)

Further here It would be relevant to note that the Transcendental code value of the last yama letters '16' is also parallel to the format value of 4 x 4 matrix format for the 16 Transcendence streams from the centers of grid zones of 5 x 5 matrix format

Still further here it also would be relevant to note that the Transcendental code value '9' being of the 9th vowel as well as the same being of 25th varga consonants, as such the above Transcendental code values makes the organization of Transcendental code values as of renewing cyclic format

112. One may have a pause here and recapitulate the above features of Transcendental code values for Devnagri alphabet letters and permit the transcending mind to continuously remain in deep sitting of trans and to glimpse the organization format of Transcendental re-cyclic features of Devnagri alphabet.

113. The Devnagri alphabet and the Transcendental code values of its letters are being reproduced here under for ready and convenient reference

Devnagri alphabet format

Transcendental code values format

1 2 3 4 5 6 7 8 9

अ इ उ ऋ लृ ए ओ ऐ औ

1 2 3 4 5

क ख ग घ ङ

2 3 4 5 6

च छ ज झ ञ

3 4 5 6 7

ट ठ ड ढ ण

4 5 6 7 8

त थ द ध न

5 6 7 8 9

1 3 5 7

य व र ल

2 3 6 9

श ष स ह

9 10 11 12 13 14 15 16

• ॐ ॐ ॐ : ॐ ॐ ॐ

Transcendental carriers carry Transcendental content

114. Transcendental carriers carrying Transcendental content has a consecutive pair of manifestation layers parallel to the organization format of the path of Transcendental carriers settled along the measuring rod of Transcendental domains synthesized as hyper cubes 0 to hyper cube 5.
115. This feature of Transcendental carriers deserves to be comprehended well for its proper appreciation to have its complete imbibing and full insight and towards this direction the following format of re-organization of Transcendental range ((1, 2, 3, 4, 5) as a pair of manifestation layers (1, 2, 3, 4) and (2, 3, 4, 5) deserves to be chased
116. In general the re-organization of five fold Transcendental range ($n + 1, n + 2, n + 3, n + 4, n + 5$) as a pair of four fold manifestation layers ($n + 1, n + 2, n + 3, n + 4$) and ($n + 2, n + 3, n + 4, n + 5$) deserves to be chased
117. Further It would be relevant to note that the pair of orientations of the manifestation layer (1, 2, 3, 4) as (1, 2, 3, 4) and (4, 3, 2, 1) shall be leading us to the super imposed state of the pair of orientations being of values (5, 5, 5, 5).
118. Still further it also would be relevant to note that the full expression of different roles of 5-space as folds of manifestation layers shall be availing 4 x 4 format as that as is evident below, along its diagonal there would be equal values:

2	3	4	5
3	4	5	6
4	5	6	7
5	6	7	8

119. Further it also would be relevant to note that the full expression along 5 x 5 format of Transcendence ranges as to 5 different roles of 5-space shall be having 5 steps long diagonal of value 5 at each step as under :

1	2	3	4	5
2	3	4	5	6

3	4	5	6	7
4	5	6	7	8
5	6	7	8	9

120. These features, as such shall be helping us have an insight about the way the Transcendental carriers carry the dimensional contents.
121. It is this feature carrying the dimensional contents which deserves to be chased well and to be comprehended properly for their imbibing and insight for glimpsing this phenomenon of our solar universe and beyond of the Brahman domain State
122. The Transcendental carriers carry within solar universe in terms of five manifestation layers (1, 2, 3, 4), (2, 3, 4, 5), (3, 4, 5, 6), (4, 5, 6, 7) and (5, 6, 7, 8)
123. The summation value of the manifestation layer (5, 6, 7, 8) being $5 + 6 + 7 + 8 = 26$, as such becomes the artifice of the coverage range of solar universe.
124. The range of the coverage of artifice 26 is of 26 sequential steps of artifice values 1 to 26 and thereby these emergence numbers values code of the 26 meters of the solar universe.
125. Here it would be relevant to note that 5 manifestation layers coverage of (1, 2, 3, 4), (2, 3, 4, 5), (3, 4, 5, 6), (4, 5, 6, 7) and (5, 6, 7, 8), as such avail the range of numerals 1 to 8.
126. The attainment step of numeral '9' that way shall be focusing upon the next manifestation layers (6, 7, 8, 9) and as such the Vedic code for the devnagri alphabet comes to be

1 2 3 4 5 6 7 8 9

अ इ उ ऋ लृ ए ओ ऐ औ

1 2 3 4 5

क ख ग घ ङ

6 7 8 9 -

च छ ज झ ञ

1 2 3 4 5

ट ठ ड ढ ण

6 7 8 9 10

त थ द ध न

1 2 3 4 5

प फ ब भ म

1 2 3 4

य व र ल

5 6 7 8

श ष स ह

10

क्ष

127. The above codes (Transcendental values code, numbers value code, Vedic code), as such deserves to be chased comprehended well for their proper appreciation and imbibing for the pure and applied values chase of different systems of the existence phenomenon of our solar universe and even beyond of Brahman domain state.

पूर्ण (Purnam)

128. Simple English rendering fro the conceptual term पूर्ण (Purnam) may be completeness of infinity.
129. Scriptural narration of the concept of completeness of the infinity / पूर्ण (Purnam) is:
 ॐ पूर्णमदः पूर्णमिदं पूर्णात्पूर्णमुदच्यते ।
 पूर्णस्य पूर्णमादाय पूर्णमेवावशिष्यते ॥
130. The simple English rendering of above expression of completeness of infinity may be as that:
- Eternity is पूर्ण (Purnam).
 - That the display of eternity is also पूर्ण (Purnam).
 - पूर्ण (Purnam) emerges out of पूर्ण (Purnam),
 - When पूर्ण (Purnam) emerges out of पूर्ण (Purnam), the eternity still remains पूर्ण (Purnam).
 - The general mathematical expression for above features of पूर्ण (Purnam) may be illustrated as $\text{infinity} + \text{infinity} = \text{infinity} = \text{infinity} - \text{infinity}$. The parallel expression $0 + 0 = 0 = 0 - 0$, as well will help us think about the completeness of '0'. Parallel to completeness of infinity and bring to focus the limitations of simple English rendering of the concept, format and features of पूर्ण (Purnam)
131. Ganita Sutra 8 conceptualizes a working rule for chase of पूर्ण (Purnam) as: **पूरणापूरणाभ्याम्** ।Puranapuranaabhyam .
132. The working format of the Sutra as per the principle of complete and incomplete, to start with shall be helping us reach at the structural set up of an interval as an organization and synthesis of say (i) closed interval as closed interval and half closed interval, (ii) Half closed interval as half closed interval

and half closed interval (iii) open interval as open interval and half open interval.

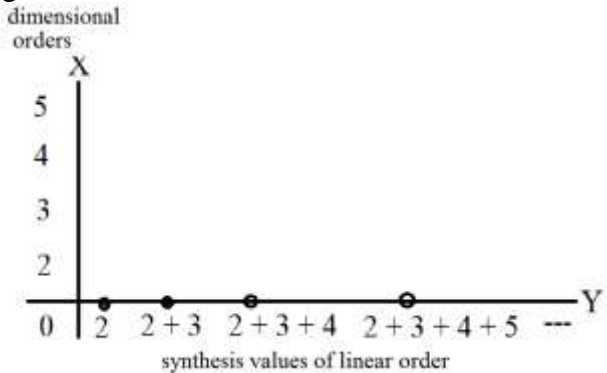
133. The topological reach as above shall be bringing us face to face with the values of Ganita Sutra 8.
134. The sequential reach of the working rule of Ganita Sutra 8 till its reach uptill Ganita Sutra 12 *सोपान्त्यद्दमन्त्यम्* , *Sopantyadvyamantyam* shall be bringing us face to face with the format and features of n dimensional domain being enveloped within boundary of $2n$ components, whereby the simultaneous availability of completeness of infinity at domain as well as at boundary shall be focusing as to how completeness of infinity may split itself as of $2n$ folds of completeness of infinity.
135. Parallel flow of streams of completeness of infinity, on comprehension of the format and features of this phenomenon, shall be providing us further insight about पूर्ण (Purnam) simultaneous at play of infinitely many folds of completeness of infinity will further add to our insight about completeness of infinity / पूर्ण (Purnam).
136. Initial perception about its format may be as $n \times n$ format leading us to infinity x infinity format

Simultaneous play of many fold

streams of completeness of infinity

137. Let us revisit the table of dimensional synthesis. As we have noticed earlier that multipliers for dimensional orders synthesis values is parallel to the absolute value of the domain fold of the respective dimensional order, and as such the dimensional order sequence (0, -1, -2, -3, -4, --) shall be leading to multipliers values sequence (2, 3, 4, 5, 6, ---)
138. Let us represent these values of multipliers along X axis.

139. Further as the difference of dimensional synthesis values of order 1 and order 2 from synthesis of four dimensions onwards comes to be (2, 2+3, 2+3+4, 2+3+4+5, ---) and these can be represented along Y axis as under



140. From the above depiction it can be comprehended as to how multi fold expression of completeness of infinity in terms of dimensional orders range (order 0, order -1, order -2, ---), while at work is unifying itself as the progression rule for the completeness of infinity in its folds for the sequence of synthesis of four dimensions, five dimensions, six dimensions and so on

141. One may have a pause here and permit the transcending mind to continuously remain in prolonged sitting of deep trans and to glimpse how the format of completeness of infinity is at work in manifestation of dimensional synthesis of whole range of multiple dimensions for whole range of dimensional orders

**Pure and applied values of dimensional synthesis manifestation along
format of**

Completeness of infinity

142. Dimensional synthesis format is at work in our solar universe, particularly as to the existence phenomenon of 'Earth' itself
143. The geometric format of manifestation of Earth, its structural synthesis as a pair of hemispheres because of its maintainance of axis for revolution around it as well as the revolution around the Sun and also having revolution around it of its moon sustaining one face towards the earth.
144. The organization and coordination of the nervous system within human frame in terms of Shed chakra format as well has dimensional synthesis format at work. So is the position in respect of seed to seed range of existence phenomenon of trees, and all that range.
145. The way multiplier value '2' to of dimensional order '0' binds the completeness of infinity of dimensional synthesis value range of this order and how it together with the multiplier of dimensional order (-1) synthesis and makes out the progression flow line for the completeness of infinity of the dimensional synthesis values of 5 dimensions of whole range of dimensional orders, deserves to be chased for its comprehension, appreciation and imbibing to acquire full insight.
146. Like that the simultaneous synthesis of multiplier values of order 0, (-1) and (-2) synthesized together and constitute progression rule for the synthesis of 6 dimensions of whole range of dimensional orders.
147. Likewise chase can be continued and it would be blissful to have a complete comprehensive view of this dimensional synthesis phenomenon of completeness of infinity at work for the existence phenomenon of solar universe and particularly for the existence of Earth itself, as well as the existence on Earth and that too within human frame being of the order of the solar universe itself.

148. The पूर्ण (Purnam) Sutra is sequentially at eight placement of the range of 16 Sutras and this placement that way deserves to be chased for its organizational significance as well.
149. Transcendental code value (TCV) of formulation पूर्ण comes to be $5 + 6 + 2 + 7 + 1 = 21 = 1 + 2 + 3 + 4 + 5 + 6$ parallel to which is the measuring rod of 6-space synthesized as hyper cubes 1 to 6 and thereby there being a coverage of 6-space / solar universe.
150. Vedic code value '20' TCV of formulation पूर्ण comes to be $1 + 3 + 5 = 9$ parallel to which is the Nav Braham (Brahmand).
151. Further here it also would be relevant to note that the artifices (1, 3, 5) is the unique triple parallel to which is the spaces triple (1-space, 3-space, 5-space) which uniquely coordinate themselves as 5-space (Transcendental domain) of solid dimensional order (3-space in the role of dimension) and of linear dimension of dimension order (1-space in the role of dimension).
152. Here it also would be relevant to note that artifices pair (6, 9) is of summation value $(6+9) = 15$ which is parallel to TCV (पूर्ण).
153. Further as that artifices 6 and 9 are coordinated as 6-space as dimension fold and 9-space as origin fold of four fold manifestation layers (6, 7, 8, 9) / (6-space as dimension, 7-space as boundary, 8-space as domain, 9-space as origin) of hyper cube 8 / 8 fold nature / 8-space, which may help us appreciate the 8th sequential placement of पूर्ण (Purnam) Sutra amongst the text of Ganita Sutras.
154. This as such shall be bringing to focus the need for chase of the organization format of Ganita Sutras.

Organization format of Ganita Sutras

155. The Vedic scriptures feature is that the organization format of the scriptural text runs parallel to the knowledge flow of the text of the scripture.
156. With it the chase of organization format of Ganita Sutras is going to be of values range in terms of which insight can be had in respect of the mathematics of Ganita Sutras.
157. First feature of the organization of the text of Ganita Sutras is that it is organized as sixteen Sutras and as such the sequential placement from first placement of Ganita Sutras 1 and artifice 1 parallel to it, uptill sixteenth placement of Ganita Sutra 16 and parallel to it artifice 16 and that way artifices range 1 to 16 in that sequence and order shall be helping us have the reach at the features of Ganita Sutras 1 to 16 in that sequence and order
158. Ganita Sutra 1
- (i) The first placement of Ganita Sutra 1, organizationally shall be focusing upon values of artifice '1'
 - (ii) This would bring in format and features of linear order / 1-space / line / linear sequential order and so on
 - (iii) It is the formulation 'एक' / ek / one with which the text starts unfolding itself for its format and features as well as for its working rule 'one more than before'.
 - (iv) This rule, as such roles out counting numbers as single digit numbers like bamboo tree, and the rolling out process being a non stop process / a process of ad-initium steps.
159. Ganita Sutra 2
- (i) The second placement of Ganita Sutras 2 brings into artifice '2'
 - (ii) With it the single digit feature of first placement Ganita Sutra 1 gives place to double digit feature for second placement Ganita Sutra 2
 - (iii) 'All from nine and last from ten' brings to focus a ten place value system whereby numerals range get foxed as single digit values and double digit and multiple digits

organization for the numbers comes into play because of the place value format.

(iv) This as such brings into a spatial order

160. Ganita Sutra 3

(i) Third placement Ganita Sutra 3 acquires as vertically and crosswise format

(ii) Linear order avails single axis while spatial order avails a pair of axes as of horizontal plane and to be along vertical axis for the given horizontal base leads to a solid order in terms of vertical plane

(iii) One may have a pause here and take note that vertical axis as a single axis, vertical plane as a pair of axes and vertical plane with horizontal base as a triple linear axes set up and as a pair of spatial axes is the feature because of artifice 3 having its role at third placement of the organization.

161. Ganita Sutra 4

(i) Artifice 4 is of unique features as much as that her in this case not only addition and multiplication operation get super imposed but also the reflection operation as well gets super imposed and that too in the context of multiplication operation which in the context of addition operation being of horizontal axes format, the multiplication is of vertical axes format, as that:

$$4 = 2 + 2 = 2 \times 2 = 2^2 = (-2)^2$$

(ii) Fourth placement Ganita Sutra 4 of feature ‘transpose and apply’ is there parallel to the feature of artifice 4.

(iii) It would be relevant to note that artifices triple (1, 2, 3) is unique triple as that the members of this triple accept no divisor of value lesser than the value of the number itself. However the fourth placement number ‘4’ is the first composite number and that the value here is equal to the multiple of ‘2’ (the only even prime) with itself

(iv) Further It would be relevant to note that the artifices quadruple (1, 2, 3, 8) manifest the geometric formats of a linear order range (1-space, 2-space, 3-space set up of

single, double and triple linear axes) transiting into the spatial domain (4-space) as that the artifices quadruple (1, 2, 3, 8) permits re-organization as (1x1, 1 x 2, 1 x 3, 2 x 4)

(v) Further it would be relevant to note that the quadruple artifices (1, 2, 3, 4) is parallel to four fold manifestation layer (1, 2, 3, 4) of hyper cube 3 with domain fold manifesting 3-space content and its center being the seat of 4-space as origin.

(vi) This as such becomes the completeness of manifested infinity

162. Ganita Sutras 5 and 6

(i) Fifth placement Ganita Sutra 5, as such goes beyond the completeness of manifested identity, and that way it becomes Sunyam state / 0-state / void state / a state devoided of manifested values.

(ii) One may have a pause here and revisit the reach from first placement of artifice value 1 through artifices values '2, 3 and 4' and reaching at artifice value '5' as of 0 manifested value

(iii) A step ahead (at sixth placement) as such, as well there is to be likewise a 0 manifested value, which is reflected in the text of Ganita Sutra 6 (Anurupye) Sunyam.

(iv) Artifices pair (5, 6) permit re-organization as (2+3, 2 x 3) which is of the format of addition operation transiting into and being followed by multiplication operation. Further it also brings to focus that the sequential beginning is with artifice 2 to be followed by artifice 3. It is of sequential generic wise being step ahead of beginning with artifice 1 being followed by artifice 2

(v) Further It would be relevant to note that the Ganita Sutra 1 is of the a working rule 'one more than before' which lead us from '1' to 1+1'.

(vi) However the Ganita Sutra text when literally chase shall be of the format and features as that 'one is more than that which is before it. It in a way takes us to 1 as the attainment

state and not the starting position, as when the working rule as above is taken as that '1 as a starting point' takes us to '2' being the attainment stage.

- (vii) This difference of focus upon the starting state from that of attainment state in a way gives rise to a pair of orientation formats, firstly of 1 as starting state taking us to '2' as attainment state, and secondly as that 1 is the attainment state and so its starting state is naturally going to be of value 0
- (viii) This change in orientation, is there because of the fourth placement feature of artifice 4 and because of it the feature of 'transpose and apply' of Ganita Sutra 4

163. Ganita Sutra 7

- (i) The seventh placement Ganita Sutra 7 of feature 'addition and minus with TCV (संकलव्यवकलनाभ्याम्) = 76, the artifice availing pair of digits (6 and 7), is a sequential continuity step of organization features transiting from sixth placement (artifice 6) to seventh placement (artifice 7)
- (ii) The processing at first placement Ganita Sutra 1 had started along linear order format of 1-space / line format and the same at seventh placement Ganita Sutra 7 as transited and transformed into a super imposed pair of orientations features of the linear order format.
- (iii) The pair of orientations of linear order format is of features parallel to the pair of artifices (+1), (-1) and it immediately brings to focus the availability and placement of zero value neutralized orientation state.
- (iv) It is this inherent feature of surfacing of neutralized 0 state orientation in between the pair of opposite orientation deserves to be chased and comprehended well and same also to be appreciated completely for full insight about this phenomenon as the transition and transformation of the artifices pair (+1, -1) into triple artifices set up (+1, 0, -1) and further the 0 state as well of its own transiting and transforming into a pair of states (+0) as well as (-0)

without any change in value and pair of axes of zero value manifesting a two dimensional frame shall be bringing into 2-space / artifice value 2 and with it there would be a completeness of manifested infinity of hyper cube 1 as a four fold manifestation layer (-1, 0, 1, 2)

164. Ganita Sutra 8

- (i) In the background of above sequential steps it would be a blissful exercise to revisit 8th placement Ganita Sutra 8 of values expression 'completeness and incompleteness).

165. Ganita Sutra 9

- (i) The ninth placement Ganita Sutra 9 'चलनकलनाभ्याम्' with TCV 'चलनकलनाभ्याम्' = 56 deserves to be chased along with seventh placement Ganita Sutra 7 'संकलव्यवकलनाभ्याम्' with TCV 'संकलव्यवकलनाभ्याम्' = 76
- (ii) The chase as artifices pair (76, 56) shall be bringing to focus the reach from artifice 6 to artifice 7 in case of Ganita Sutra 7 and reach of Ganita Sutra 9 being a reach of artifice 6 to artifice 5.
- (iii) The artifices pair (9, 7) like the artifices pair (5, 7) are of the format of (domain fold, dimension fold) in case of artifices pair (9, 7) and of (the format of (dimension fold, domain fold) in case of artifices pair (5, 7) being of opposite orientations.

166. Ganita Sutra 10

The tenth placement Ganita Sutra 10 'यावदूनम्' with TCV 'यावदूनम्' = 41 and VCV (यावदूनम्) = 13 and further $10 = 1 + 2 + 3 + 4$ and still further (01, 10) constituting a reflection pair shall be leading us to 4-space / hyper cube 4 accepting measuring rod synthesized hyper cube 1 to 4 and 13 edged cube being the dynamic state 12 edged cube making up the deficiency and working out completeness of infinity.

167. Artifice 10 and its reach for 10 folds of Transcendental knowledge along the format of creative boundary of Transcendental domain of ten folds deserves to be chased.

168. One way is, to reach at it in following steps:
- 169 (i) Take ten points set up along a line
- 170 (ii) These ten points cover and contain nine units of line.
- 171 (iii) These nine units of line are of the format and features of range of nine domains folds
- 172 (iv) Sequentially these to be of values formats of domain folds of interval, square, cube, hyper cube 4, 5, 6, 7, 8, 9.
- 173 (v) This range of nine domain folds shall be leading to range of 7 dimension folds
- 174 (vi) This range would be parallel to seven steps long artifices range:
1, 2, 3, 4, 5, 6, 7
- 175 (viii) Parallel seven fold manifestation layers would be
- | | | | | | | |
|---|---|---|---|---|---|----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 4 | 5 | 6 | 7 | 8 | 9 | 10 |
- 176 (ix) These seven fold manifestation layers of four folds each as reflected column wise above, would get extended as seventh fold Transcendence ranges as under:
- | | | | | | | |
|---|---|---|---|---|----|----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 5 | 6 | 7 | 8 | 9 | 10 | 11 |
- 177 (x) This range of seven fold Transcendence ranges as unity state domain fold shall be leading to five fold Transcendental dimensional format of format and values (5, 6, 7, 8, 9)

- 178 (xi) This Transcendental dimensional format (5, 6, 7, 8, 9) shall be leading to Transcendental dimension of dimension state solid order of triple values (5, 5 + 3, 5 + 3 + 3).
- 179(xii) The Transcendental dimension of dimension state triple values expression (5, 8, 11) shall be organized itself along its linear order (of spatial format) whereby the outer values pairing (5, 11) would be of summation value (5 + 11) = 16 while the inner value to remain '8'
- 180 (xiii) This outer and inner organization of values in its fourth fold (first being the unity state of artifice value 7) second being of Transcendental dimension of artifice value 5, third being of dimension of dimension artifice value 3 and finally the fourth state value of artifice 1) as such shall be of the format and features of hyper cube 8 with domain boundary ratio A^8 as domain fold getting enveloped within $8 \times 2 = 16$ components of unity state boundary A^7 in the role of boundary.
- 181 (xiv) This as such because of the spatial order of creator's space (4-space) shall be leading from (16, 8) to (8, 4) set up of hyper cube 4 itself.
- 182 (xv) Hyper cube 4 is of the format and features of idol of Lord Brahma, four head lord, creator the supreme in whose each head are a pair of eyes and Lord Brahma sitting gracefully on lotus seat of eight petals meditates upon Transcendental lord (Lord Shiv), five head lord with three eyes in each head within the cavity of heart of creator and creator (lord Brahma) multiplies ten fold as ten Brahmas.
- 183 (xvi) This range of ten Brahmas become the source reservoir of ten folds of Transcendental knowledge as ten folds of the

knowledge of the Discipline of Vedic mathematics, Science & Technology.

184 (xvii) The spatial order of 4-space, that way sequentially takes to ten steps long values range (2, 4, 6, 8, 10, 12, 14, 16, 18, 20)

185 (xviii) Here it would be relevant to note that this ten steps long values range is the range of dimensional synthesis values of spatial order (2-space in the role of dimension) of synthesis of (1, 2, 3, 4, 5, 6, 7, 8, 9, 10) number of spatial dimensions.

186 Still further, it also would be relevant to note that this range of values is also parallel to the boundary components of hyper cube 1 to 10

187 As such the organization of ten folds of Transcendental knowledge manifest as boundary components of hyper cube 1 to 10 and same are also of the format and features of dimensional synthesis values of spatial dimensions number 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 respectively

188 One may have a pause here and permit the transcending mind to continuously remain in prolonged sitting of deep trans and to glimpse and imbibe the bliss of these ten folds of Transcendental knowledge range

189 Scriptures preserve the Transcendental values of each of these ten folds of knowledge as the Transcendental domains of ten goddess of the order (Goddess Kamla Devi to Goddess).

190 This scriptures further preserve how the sadkas seekers of knowledge can attain these during Transcendental 9 days ranges occurring four times a year.

191 The artifices 11 to 16 are of formats and features parallel to 11 geometries of 5-space, 12 components of Transcendental boundary of self referral space (6-space), 13 edged hyper cube 4, Transcendental dimensional order $1 \times 3 \times 5$ and shodash Kalan / 16 features range of the incarnation of Lord Vishnu, presiding deity of 6-space.

192 Artifice 16 accepts re-organization as $16 = 5 + 6 + 5$

193 Parallel to it, artifice 13 accepts re-organization as $13 = 4 + 5 + 4$

- 194 These features of artifices pair (16, 13) that way lead us to coordination features of 16 Ganita Sutras and 13 Ganita Upsutras.
- 195 Here It would be relevant to note that 6-space accepts 13 geometries range.
- 196 The summation value $16 + 13 = 29$ and coordination of artifices pair 26, 29 as dimension fold and origin⁰⁹ fold of four fold manifestation layers (26, 27, 28, 29) of hyper cube 28 shall be bringing to focus the transition range from first perfect number (6) to second perfect number (28)
- 197 The artifices range 1 to 26 and parallel to it five fold manifestation layers (1, 2, 3, 4), (2, 3, 4, 5), (3, 4, 5, 6), (4, 5, 6, 7), and (5, 6, 7, 8), with summation values 10, 14, 18, 22, 26 with grand summation value 90 bring to focus hyper cubes 3, 4, 5, 6, 7 parallel to the Transcendence range (3, 4, 5, 6, 7)
- 198 With it the manifestation layer (3, 4, 5, 6), Transcendence range (3, 4, 5, 6, 7) and self referral range (3, 4, 5, 6, 7, 8) come to the central focus
- 199 Parallel to it is the range (Earth, Water, Fire, Air, Space, Sun, Pole Star, Nature)
- 200 Beyond that is the Brahman domain (Brahmand state)



VMS Conceptual statements

03

Chase along geometric formats

(201 to 300)

03

Chase along geometric formats

(201 to 300)

201 Vedic mathematics, Science & Technology values accept chase along geometric formats

202 Geometric formats, essentially are the manifested domains.

203 Manifested domains are the domain folds of manifestation layers of hyper cubes.

204 That way the features of geometric formats essentially the features of the content of the respective space playing the role of domain fold to be chased.

205 With it the space content comes into focus during chase of the values of VMS & T

206 Accordingly it may be taken as that the features of geometric formats are supplied by the space content itself

- 207 Amongst others the features of geometric formats, that way get linked with the dimensional order of the space and the same manifest as the dimensional frame of the space.
- 208 This, as such shifts the focus to the dimension fold of the concerned domain fold
- 209 However as the dimension fold itself is the manifested space content role, therefore the focus gets focused upon the dimension of the dimension fold
- 210 It is this feature of the geometric format which deserves to be comprehended well and to be appreciated fully for proper imbibing and for having complete insight about this phenomenon of geometric formats taking us uptill dimension of the dimension level

Geometric format of 3-space

- 211 Chase along geometric format of 3-space shall be bringing 3-space content lump manifesting as domain folds within three dimensional frame of linear axis
- 212 It as such shall be bringing to focus the solids / 3-space bodies.
- 213 Of these cube and sphere are two representative regular bodies accepting common formulation for their domain, boundary ratio as $A^3: 6 B^2$
- 214 As such the chase of features of geometric format of 3-space, it may be appropriate to have chase of the structural features of the set up of cube, as well as of sphere
- 215 Let us revisit 'cube' and 'sphere' and comprehend the manifesting difference in respect thereof vis-à-vis each other, as much as that the surface boundary of sphere is integrated

whole a single sheet enveloping solid domain, while on the other hand the spatial boundary of cube is integrated set up of 6 surface plates together enveloping solid domain within geometric envelope of 26 components (8 corner points, 12 edges and 6 surfaces)

216 This difference of geometric envelopes of solid domains, brings to focus particularly the geometric envelope in case of cube

217 Let us revisit the geometric envelope of cube and it shall be bringing to focus the format of the geometric component of cube being the set ups of points (0 space bodies), lines (body) and surfaces (2-space bodies)

218 Points, lines and surfaces as bodies of 0 space 1 space, 2 space respectively, as such shall be bringing to focus 0 space content 1 space content and 2 space content in focus.

219 This triple space contents (0-space content, 1-space content, 2-space content) manifest as 0 space domain fold, 1 space domain fold and 2-space domain fold.

220 These three consecutive space content lumps / domain folds, as such shall be manifesting three folds of four fold manifestation layer

221 One may have a pause here and take note that this triple three folds may be of the manifestation layer (-1, 0, 1, 2) as well as of (0, 1, 2, 3) of hyper cube 1 and hyper cube 2 respectively.

222 This feature of the geometric components synthesizing boundary fold of cube / hyper cube 3 deserves to be chased and comprehended fully as that these three folds together constitute the central 3 folds of the Transcendental range (-1, 0, 1, 2, 3) with summation value '5'

223 Let the geometric envelope of cube revisited again with a focus upon the stitching role of eight corner points

224 Amongst others, eight corner points bring into play and contribute the following features:

(i) Point is a 0-space body

(ii) These (points) are eight in number

(iii) Individually these are the origin points of three axes manifesting in the set up as three edges

(iv) Such manifesting format is of a three dimensional frame of half dimensions

225. Let us again revisit the geometric envelope of cube with a focus upon the stitching role of its edges.

226 Amongst others the edges of the cube bringing to play and contribute the following features

(i) Edges are 1-space bodies

(ii) these (edges) are 12 in number

(iv) Each edge connects a pair of corner points as end points of the edge

(v) The edge connecting pair of corner points as end points give a reach for the format of the edge from its open interval format to that of a closed interval format.

(vi) The manifesting role of a corner point being of origin as well, as such edge connected with it shall be making it as an axis

227 As each edge is connected with a pair of pair of corner points the manifested roles of origin, as such edge accepts the format and features of a synthesis of a pair of axis (infact half axis) of opposite orientation.

228 Let us again revisit the geometric envelope of cube with a focus of interconnected state of corner points and edges.

229 Amongst other the corner points and edges in their stitched state as it is, bring into play and contribute the following features

230 The pair of corner points as a pair of 0 space bodies together as a pair of dimensions of zero order shall be constituting a two dimensional frame.

- 231 The edge being of a synthesis format of a pair of linear axes of opposite orientation shall be neutralizing the orientations and thereby making the edge as a track of a moving point and manifesting flow of 0 values from the corner point in the manifested roles of origins
- 232 The simultaneous role of 0-space as corner points and origins, on the one hand and simultaneous rule of 0 space as origin fold as well as dimension fold together with the neutralized state of edges shall be playing the roles and contributing for the stitching of the surface plates as boundary fold enveloping solid domains
- 233 Let us again revisit the geometric envelope of cube in the background of the geometric envelope of sphere it would come to focus as that in both cases boundary is of spatial features but in case of cube there are 0 area units as well marking their independent existence as geometric components which is no more there in case of a sphere.
- 234 This feature of geometric envelope of cube brings into the need of measuring rod for chase of the geometric envelope which shall be of the format and features of measuring units for points and lines as well, in addition to the measuring units of surfaces. This as such brings into a measuring rod synthesized by hyper cubes 0, hyper cube 1 and hyper cube 2.
- 235 Here one may have a pause here and take note that the measuring rod synthesized by hyper cubes 0, 1 and 2 is of the format and features of exhaustive coverage of 2-space as domain fold of hyper cube 2.
- 236 Let us again have a pause here and have a fresh look at the set up of edges.
- 237 Each edge is having a pair of end points (corner points) of cube and those as well being in the role of origin of three dimensional frame of half dimension
- 238 Further the opposite orientations get super imposed upon each other parallel to artifices pair (+1, -1) and this feature inherently accepts a triple artifices format (+1, 0, -1) and the 0

value flow along the neutralized edge, from both ends shall be synthesizing a joint, in between the pair of ends,, say at the middle of the edge and thereby the two points fixation of the edge, as such would transit and transform into a triple points fixation for the edge

239 One may have a pause here and take note that of happening said transition and transformation from a pair of points fixation from a line to a triple point fixation for a line.

240 This transition attainment is attainable for all the 12 edges and such attainment would further bring to focus the triple flow of zero values from each of the corner points being responsible for such attainment

241 With triple points fixation for edges and consequential attainment of middle points of edges that way would amount to having a set of 20 points fixation stitching for the geometric envelope of the cube

242 With it the fixation of the centers of all the six surfaces would be reachable and the availability of set of six more points (center of the surfaces) shall be making a set of 26 stitching points for the geometric envelope of the cube

243 One may have a pause here and take note that a step ahead, the reach at the center of the cube as 27th point shall be amounting to fixation of 26 stitching point of the geometric envelope itself with the center of the cube itself.

244 Artifice 27 accepts re-organization as $27 = 3 \times 3 \times 3 = 3^3$.

245 Points as 0 values set ups parallel to 0 space and 0 dimensional order having a reach uptill solid origin / four fold manifestation layer (0, 1, 2, 3), as such shall be bringing us face to face with a very big range of features whose pure and applied values deserves to be chased and to be availed.

246 One may further have a pause here and have a fresh look at the set up of the solid domain enveloped within spatial boundary of cube.

247The center of cube permits its fixation in many ways, prominent amongst them are parallel to the setups of points, lines, surfaces and solids as under:

- i) 26 Stitching points of geometric envelope of cube give a reach for fixation of the center of the cube
- ii) A linear dimensional frame of 3 dimensions with origin at center of the cube, that way gives a reach for fixation of the center
- iii) The transition of linear dimensional frame of three dimensions into a spatial dimensional frame of three dimensions as well shall be providing a reach for fixation of center of the cube
- iv) The cut off a cube into eight sub cubes by the spatial dimensional frame of three dimensions, as such shall be making origin / center of the cube being the seat of corner points of the cube of the sub cubes and in terms thereof there would be a reach for fixation of the center of cube / origin of 3-space

248Let us further have a pause here and have a fresh look at the setup of the domain fold of a cube and we would be a face to face with its set up as a manifested 3-space content lump

249Likewise the domain fold of each sub cube as well would be a 3-space content lump and as this split for a cube into sub cubes is an ad-infintum process permissibility, as such each point of the domain fold of sub cube may be taken as a 3-space content lump at zero value.

250However the center of the cube as it being a seat of origin of 3-space and as it also is the seat of inner most corners of eight sub cubes, as such center / origin permitting collapse of sub cubes at it, makes the center / origin being a zero value content lump of domain which is enveloped within a solid boundary

251One may have a pause here and permit the transcending mind to continuously remain in deep sitting of trans and to glimpse distinguishing feature of the center from the origin from the set ups of all other points of domain fold of the cube.

- 252 It shall be bringing us face to face with distinguishing feature of all other points of the domain fold of cube from that of center / origin of the cube / 3-space as that such manifestation is of the format of hyper cube 4, that is 4-space content lump being enveloped within 3-space content lump in the role of a boundary fold while 4-space content lump manifesting as a domain fold of hyper cube 4.
- 253 One may further have a pause here and take note that the phenomenon of simultaneous manifesting of four fold consecutive dimensional synthesis deserves to be chased properly comprehend and to fully appreciate the set up of cube as hyper cube 3
- 254 One shall have a pause here and permit the transcending mind to continuously remain in prolonged sitting of deep trans and to glimpse the phenomenon of domain fold being of a lesser degree dimension order transcending through origin fold because of its higher dimensional order and that of the domain fold
- 255 This feature of Transcendence of manifestation layers / hyper cubes for their domain folds through origin folds and manifesting as additional fold, that is fifth fold, deserves to be comprehended fully as the fifth fold becomes a manifested domain fold of a higher dimensional order than that of the dimensional order of origin fold
- 256 As such cube as a four fold manifestation layer (1, 2, 3, 4) with its transition and transformation into a Transcendence range (1, 2, 3, 4, 5) shall be manifesting fifth fold of solid dimensional order, which would mean that 3-space content lump having earlier manifested as cube as domain fold of hyper cube 3, now after Transcendence having manifested a solid dimensional order domain in the role of fifth fold as base fold of the origin fold
- 257 One may further have a pause here and take note that the process of Transcendence has resulted into 3-space content originally having manifested as the domain fold being in static

state while in the process of Transcendence it has re-manifested itself in its dynamic state as domain fold in the role of dimension fold of solid order Transcendental domain (5-space as domain fold with 3-space in the role of dimension fold)

258 One may further have a pause here and take note that this feature of transition for the domain fold in its static state to that of dynamic state deserves to be chased as in the process, transition and transformation takes place and the original linear order set up of cube ultimately through the process of Transcendence, transit and transform into solid order Transcendental domains (5-space) as domain fold of solid dimensional order

259 Further it also would be relevant to note that it in a way amounts to transportation of space content.

260 In the context, it also would be relevant to note that cube as domain fold of hyper cube 3 is domain fold of the transition layer (1, 2, 3, 4) while Transcendental domain as domain fold of hyper cube 5 is domain fold of hyper cube 6 of the format of manifestation layer (3, 4, 5, 6)

261 One may further have a pause here and take note that the transition and transformation of linear dimensional domain fold cube into solid order dimensional fold (5-space content lump as domain fold of hyper cube 5) infact amounts to attaining transition and transformation for the manifestation layer (1, 2, 3, 4) into manifestation layer (3, 4, 5, 6)

262 This simultaneous transition and transformation for all the four folds of the manifestation layer (1, 2, 3, 4) into respective order folds of the manifestation layer (3, 4, 5, 6), amounts to the simultaneous transformation of hyper cube 3 for its transition and transformation into hyper cube 5

263 This transition and transformation of hyper cube 3 into hyper cube 5, that way amounts to the manifestation layer (1, 2, 3, 4) transiting and transforming into manifestation layer (3, 4, 5, 6)

- 264 Vedic mathematics, Science & Technology accepts this as the basic format for its mathematical tools for chase of transportation of space content in terms of the frequencies of the manifestation layers accepting them to be regulated by their dimensional orders
- 265 Matter, content, substance and Transcendental are the sequential features of dimension fold, boundary fold, domain fold and origin fold as domain folds manifesting their respective space contents
- 266 The transportation of space content as such would mean the Transcendence for the domain fold into base fold.
- 267 The transition and transformation of the four fold manifestation layer into five fold manifestation layer would also amount to the transition and transformation of the four fold manifestation layer (dimension fold, boundary fold, domain fold, origin fold) into next manifestation layer of its four fold being (boundary fold, domain fold, origin bold, base fold).
- 268 This, that way would amount to a shift for quadruple set of features (matter, content, substance, Transcendental) into next quadruple (content, substance, Transcendental, self referral)
- 269 One may have a pause here and permit the transcending mind to continuously remain in deep sitting of trans and to chase this pair of quadruples as a synthesized five folds range (matter, content, substance, Transcendental, self referral) parallel to format and features of five fold range (Earth, Water, Fire, Air, Space)
- 270 A step ahead the six fold range of (matter, content, substance, Transcendental, self referral, unity state of matter) parallel to 6 fold range of (Earth, Water, Fire, Air, Space, Sun)
- 271 One may further have a pause here and take note that 3-space (cube) in its different four fold roles as origin fold, domain fold, boundary fold and dimension fold, shall be expressing its values along 4 x 4 format.
- 272 The expression for 5 fold roles for 3-space would find expression as :

-1	0	1	2	3
0	1	2	3	4
1	2	3	4	5
2	3	4	5	6
3	4	5	6	7

273 One may have a pause here and take note that above values expression for four fold roles of 3-space as manifestation layers are of the summation values:

$$0+1+2+3=6$$

$$1+2+3+4=10$$

$$2+3+4+5=14$$

$$3+4+5+6=18$$

274 Further the values expression of five fold roles of 3-space as Transcendence ranges are of the summation values

$$(-1+0+1+2+3)=5$$

$$0+1+2+3+4=10$$

$$1+2+3+4+5=15$$

$$2+3+4+5+6=20$$

$$3+4+5+6+7=20$$

275 The artifices pair (18, 25) accepts re-organization as (3+4+5+6) (3+4+5 + 6+7), which is parallel to the manifestation layer and Transcendence ranges of hyper cube 5 / Transcendental domain (5-space) in the role of domain fold

276 Still further it would be relevant to note that artifices pair (18, 25) is parallel to the cyclic periods of end pair of planets namely 'rahu' (18 years) and 'ketu' (7 years) which represent head and trunk of body and complete body being of the format and features of $18 + 7 = 25 = 5 \times 5$.

277 With it, it can be said that the manifestation layer (3, 4, 5, 6) and Transcendence range (3, 4, 5, 6) deserves to be chased thoroughly for proper comprehension and full appreciation of the five folds of the Transcendental range (3, 4, 5, 7) and their values to be completely imbibed to have a blissful insight about the virtues of existence phenomenon of our solar universe within human frame

- 278As such the chase of the set up of cube deserves to be had firstly within cube itself
- 279Secondly the chase of cube des to be had within 4-space, as well as solid boundary of 4-space
- 280Thirdly cube deserves to be chased as within 5-space and also as solid dimensional order
- 281Still further cube also deserves to be chased as boundary of boundary of Transcendental domain (5-space)
- 282It would be relevant to note that it may require $8 \times 10 + 5 = 85$ cubes fixation for the boundary of boundary of Transcendental domain in reference to the solid dimensional frame of 5-space.
- 283Still further it also would be relevant to note that self referral domain would require 960 cubes for its fixation
- 284Still further it also would be relevant to note that parallel to the summation value of the manifestation layer (3, 4, 5, 6) there are precisely 18 infinite series of groups
- 285It would be blissful to chase the values of cube in terms of Ganita Sutra -1
- 286It would be blissful to chase the values of cube in terms of Ganita Sutra -2
- 287It would be blissful to chase the values of cube in terms of Ganita Sutra -3
- 288It would be blissful to chase the values of cube in terms of Ganita Sutra -4
- 289It would be blissful to chase the values of cube in terms of Ganita Sutra -5
- 290It would be blissful to chase the values of cube in terms of Ganita Sutra -6
- 291It would be blissful to chase the values of cube in terms of Ganita Sutra -7
- 292It would be blissful to chase the values of cube in terms of Ganita Sutra -8
- 293It would be blissful to chase the values of cube in terms of Ganita Sutra -9

- 294It would be blissful to chase the values of cube in terms of
Ganita Sutra -10
- 295It would be blissful to chase the values of cube in terms of
Ganita Sutra -11
- 296It would be blissful to chase the values of cube in terms of
Ganita Sutra -12
- 297It would be blissful to chase the values of cube in terms of
Ganita Sutra -13
- 298It would be blissful to chase the values of cube in terms of
Ganita Sutra -14
- 299It would be blissful to chase the values of cube in terms of
Ganita Sutra -15
- 300It would be blissful to chase the values of cube in terms of
Ganita Sutra -16



Vedic Mathematics Science and technology Books

Introductory

1. Vedic mathematics science and Technology is a complete Discipline.
2. These Disciplines runs parallel to pure Values of Vedic Knowledge.
3. Discipline VMS & T values are applied values running parallel to pure values of Vedic Knowledge.
4. Pure and applied values of Vedic Knowledge run parallel to each other.
5. These pure and applied values together constitute Vedic System.
6. Pure and applied values of Vedic knowledge complement of supplement Vedic Systems along common format.
7. This common format of Vedic systems is designated and is known as ‘Sathpatya format’.

8. Chase of 'Sathpatya format' is done in terms of Sathpatya measuring rod.
9. Lord Vishnu is the presiding ditty of Sathpatya measuring rod.
10. Lord Brahma is the presiding ditty of the measure of the sathpatya measuring rod.
11. Sathpatya measuring rod chases transcendental flow of Jyoti.
12. Within Jyoti florists our Tri-Loki.
13. These chase values are the Sathpatya Upved Values.
14. Sathpatya Upved is the Upved of Atherv Ved.
15. Atherv Ved is the essence of the values of Tri-Ved (Rig-Ved, Yagur Ved, Sam Ved).
16. Rig Ved has 21 branches.
17. Yagur Ved has 101 branches.
18. Atherv Ved has 1000 branches.
19. Atherv Ved has 9 branches.
20. Inner folds of 9 branches of Atherv Ved are 5.
21. These five inner folds of Atherv Ved are sustained by $6 \times 4 = 24$ Vishnu Tatav/elements.

22. This sustains is parallel to sustains of Tri-loki by Tri-Murti (Lord Brhama, Lord Shiv, Lord Vishnu) and the base of this sustains are the virtues of Goddess Bhagwati.
23. With this Goddess grace the five inner fold branches of Atherv Ved unfold 5 x 5 format for Panchkaran of Panchvritya.
24. This 5 x 5 Panchikaran format unfold 5 x 5 x 5 transcendence format.
25. Vedic Mathematics science and technology avail this format for transcendental carriers of Sun light.
26. As such the graced initial stage text books for school level instruction are being planned.
27. Aim is cover glasses 9, 10,11,12 level. Object is to expose to the expose Mathematics, science as technologies along 3-space, 4-space, 5-space and 6-space formats.
28. Priszally the explorer is going to the about Tri-Loki and Tri-Murti along Hyper cube-3,4,5 and 6 format.
29. Explorer at class ix level is going to be of format and features of Hyper cube-3.

30. Here the focus would be upon linear dimension order, spatial boundary, solid domain and creative origin.
31. Explorer at class x level is going to be of format and features of Hyper cube-4.
32. Here the focus would be upon spatial dimension, solid boundary, creative domain and transcendental origin.
33. Explorer at class xi level is going to be of format and features of hyper cube-5.
34. Here the focus would be upon solid order, creative boundary, transcendental domain and self-referral origin.
35. Explorer at class xii level is going to be of format and features of Hyper cube-6.
36. Here the focus would be upon creative order, transcendental boundary, self-referral domain and unity state origin.
37. This four years explorer visualizes complete unity state range of 1-space to 7-space formats available for the Existence phenomena of our solar universe with pole star as its origin.
38. With this explorer, it is expected that the mental states of young minds would get perfected for comprehension and

appreciation of the format and features of 'Interval, square, cube, Hyper cube-4, Hyper cube-5, Hyper cube-6 and Hyper cube-7.

39. The full appreciation of values and features of this formats shall be ensuring deep insight of our Existence phenomena.
40. With this blissful attainment, one can urge to enter the Vedic domains through the formats of Vedangas.

Three Space VMS & T

Lesson-1 Introduction of the Discipline

1. 3-space VMS & T Discipline is of Hyper cube-3 format to begin with, it we taken by way of definition that 'Cube' is 'Hyper cube-3'.
2. As a consequence, 'Hyper cube-3' format means cube format.
3. The features of hyper cube-3 format would mean features of cube format.
4. Cube is our well known body.
5. Let us have a fresh visit to the setup of 'Cube'
6. It has:
 - (A). 8 Corner points.
 - (B). 12 Edges
 - ©. 6 Surfaces.
 - (D). 1 Volume
7. Let us again have a fresh look and setup of a cube.
8. We can observed that in each of the 8 corner points, there is a imbedded a 3-dimensional frames of Half dimension.

9. And that the orientations of the Axes are inward along the formats of edges of the cube.
10. It can be further observed that from the pair of end points of each edge of the cube., there are a pair of Axes of two different 3 dimensional frames, availing the format of the edge and both these Axes are of opposite orientation and as such is can be taken that these reach up-till the middle of the edge and neutralized themselves.
11. One may have a pause here and have a fresh look at the setup of the edges of the cube in the Light of above feature of neutralization and the middle of the edges.
12. There being 12 edges, as such there shall be 12 such neutralized middle points.
13. One may further have a pause here and have a fresh look at the setup of the surface in the light of above features of neutralized middle points of the edges.
14. These middle points of edges will help fix centre of the surfaces. Simultaneously it shall be leading us to 4 quarters setup for each of the surface.

15. Let us further have a pause here and have a fresh look at the setup of the volume in the light of the above features of the setup of the edges and the surfaces.
16. It would be coming to light that volume is splitting into 8 sub volumes sub cubes.
17. Simultaneously it also shall be taking us to centre of the cube.
18. The fixation of a three dimensional frame with origin at centre of the cube and Axes passing through centre of the surfaces shall be giving us comprehensive view of the setup of the cube.
19. One shall visit and re-visit the setup of the cube to acquire full comprehension of the feature of this setup.
20. It is with the appreciation and imbibing of the features of the setup of the cube that one shall be acquiring proper insight and comprehension of the format and features of cube to avail them as a format values for 3-space mathematics science and technology.
21. It would be a blissful exercise to sit comfortably and permit the transcending mind to be face to face with the format and

features of cube as format values of 3-space
mathematics science and technologies.

Lesson-2

Space Insight and oversight cube

1. While sitting insight a room, it appears that whole space is 3-space.
2. After coming out form a room, one realized that whole space is not exhaustively covered within a cube Howsoever big it may be.
3. This gives an instructive Idea that space within cubes the 3-space while the cube oversight cube, is not a 3-space.
4. Within a cube can be drawn intervals, squares and cubes.
5. It gives and idea that single Axis provides a format for manifestation of interval.
6. Further as that, pair of Axes lead to a format for manifestation of a square.
7. Still further that, all the 3 Axes lead to a format for manifestation of cube.
8. With it, it may be formally define that 3-space accepts a dimensional frame of 3 Axes.
9. Further that within 3-space simultaneously manifest intervals, squares and cubes.
10. This feature and reach of 3-space in terms of a 3 dimensional frame deserve to be comprehended thoroughly and with a caution as that whole of the space, as such is not exhausted as howsoever big

- the cube may be, there always remains a space which eludes to be the volume format of the cube.
11. One may have a pause here and take note that with imbedded of a three dimensional frame at the central of the cube splits into eight parts as volumes of Eight sub cubes.
 12. This split of cube into eight sub cubes, parallel to split of the volume of the cube into eight parts parallel to volume of eight sub cubes, may further be accepted being parallel to split of 3-space into eight octants.
 13. One shall have a pause here and re-visit the above feature of 3-space, time and again, and to have an insight about the parallel features of cube and space (3 dimensional frame).
 14. It would be a blissful exercise to chase split of cube into eight sub cubes.
 15. Further it also would be a very blissful exercise to chase split of space within three dimensional frames into eight octants.
 16. Still further, one shall sit comfortably and permit the transcending mind to glimpse the phenomena of centre of the cube the seat of inner most corner points of eight sub cubes.
 17. Still further it also would be very blissful to comprehend eight inner most corner points of its sub cubes enveloping the centre of the cube as a seat of space which transcendence the volume of the cube.

Lesion-3

Solid boundary of space

1. Let us re-visit the setup of an interval.
2. It would be observed that a pair of end points constitute boundary of any interval.
3. Let us further observe the setup of a square, it would be observed that square accepts a linear boundary of 4 components (4 boundary lines).
4. Let us further re-visit the setup of a cube.
5. It would be observed that it accepts spatial of 6 components/6 surface plates envelop the volume of the cube.
6. One shall have a pause here and take note that the setup of an interval consists of length part (a^1) and pair of end points (2^0).
7. Further the setup of the square is of format of features of area (1^2) within boundary 4 linear components (4^1).
8. Still further the setup of cube is of the format and features of volume (A^3) enveloped by ($6A^2$).
9. One may further have a pause and take note that above format and features of interval, square and cube may be expressed as:

i). $A^1: 2A^0$

ii) $A^2: 4A^1$

iii) $A^3: 6A^2$

10. The above features accept common formulation

$$A^n: 2N^{n-1}, N=1, 2, 3$$

11. One may have a pause here and take note that for $N=4$, the above formulation shall be leading to the format and features:

$$A^4: 8A^3$$

12. One may have a pause here and take note that the formulation A^4 is to $8A^3$ leads us to the setup of a body which accepts solid boundary of 8 components.

13. One may have a pause here and take note that the interval, 1-space body is accepting boundary of a pair of points/0-space bodies.

14. The square, 2-space body is accepting linear boundary of 4 components/ four 1-space bodies.

15. Cube, the 3-space body is accepting spatial boundary of 6 components/six 2-space bodies.

16. In continuity, 4-space body (hyper cube-4) accepts solid boundary of 8 components/ eight 3-space bodies.

17. It would be accepted by way of definition that interval is hyper cube-1, square is hyper cube-2 and cube is hyper cube-3.

18. It would be a blissful exercise to simultaneously chase format and features of the setup of hyper cube-1,2,3,4 in terms of common formulation.

$A^n: 2N A^{n-1}, N=1, 2, 3, 4,$

Still further one shall sit comfortably and permit the transcending mind to glimpse these phenomena of hyper cube-4 at with a seat at the centre of the cube with 8 sub cubes playing the role of solid boundary of eight components.

Lesion-4

Nine points fixation of cube

1. Let us re-visit the setup of a cube.
2. This setup leads to fixation in terms of eight corner points and ninth centre.
3. One may have a pause here and take note that as cube permits splits into eight sub cubes with fixation of a 3 dimensional frame with origin super imposed upon this centre, as such it is only with the centre being shield that the integrity of this setup of the cube can be ensured.
4. It is this shield nature of the centre which makes it ninth point of the range of nine points ensuring fixation of the cube.
5. One may have a pause here and have a fresh look at the setup of the cube splitting as eight sub cubes.

6. One may further have a pause here and take note that the setup of the cube with its eight corner points being super imposed upon the centers of sub cubes of original cube shall be having its centre as well being super imposed upon the centre of original cube.
7. For the sake of convenient reference, the original cube may be taken as the outer cube.
8. The cube with its corner points and the centre of the sub cubes of outer cube may be designated and accepting as interval cube.
9. One may have a pause here and take note that this internal cube infact is of volume equal to the volume of any of the sub-cubes of the outer cubes.
10. As such internal cube may be taken as the ninth sub cube of the outer cube.
11. One may have a pause here and take note that the setup of the internal cube/ninth sub cube is the setup of eight sub sub cubes, which sub sub cubes are the eight sub sub cubes of eight sub cubes of the outer cube .
12. It is this feature of the cube which will help us have an insight and vision about the setup of the cube having its fixation in terms of nine sub cube.
13. One shall have a pause here and permit the transcending mind be face to face with the fixation of the cube in terms of nine points, as well as in terms of nine sub cubes.

14. It would be a blissful exercise to chase enveloping of centre of the cube by inner most corners of eight sub cubes of the cube.
15. Still further, it also would be a very blissful exercise to chase the fixation of the centre of the cube in terms of eight sub sub cube of eight sub cubes of the cube.
16. It would be blissful experience to law the ninth sub cube of the cube.
17. It further would be a very blissful exercise to be face to face with the phenomena of sequential splits of cubes into sub cubes, sub cubes into sub sub cubes and further sub sub cubes into sub sub sub cube and so on being ad-infinitum.

Sum up of the features

1. Basic Geometric formats
 - i). Point
 - ii). Line
 - iii). Surface
 - iv). Solid
 - V). Hyper Cube format
2. Basic Structured geometric formats
 - i). Point body of 3-space content
 - ii). Line of 3-space content points
 - iii). Surface of 3-space content lines

- iv). Solids of 3-space content surfaces
 - V). Hyper format of 4-space content
3. Basic Units
- i). Length
 - ii). Area
 - iii). Volume
 - (iv). Hyper unit of spatial order
4. Representative regular body of 3-space
- i). Cube is the representative regular body of 3-space.
 - ii). sphere is another representative regular body of 3-space.
5. Representative regular bodies of 1,2,3 spaces.
- i). Interval is the representative regular body of 1-space
 - ii). Square is the representative regular body of 2-space
 - iii). Cube is the representative regular body of 3-space.
 - iv). Circle is the representative regular body of 2-sapce.

- V). Sphere of the representative regular body of 3-space.
6. Domain-Boundary ratios formulation
- i). of 1-space is A^1 : is to $2 A^0$
 - ii). of 2-space is to $II A^2$: $4 A^1$
 - iii) of 2-space is to $II A^3$: $6 A^2$
7. Four folds of Hyper cube-1
- i). (-1) Space plays the role of dimension fold.
 - ii). 0-space plays the role of boundary fold.
 - iii). 1-space plays the role of domain fold.
 - iv). 2-space plays the role of origin fold.
8. Four folds of Hyper cube-2
- i). (0) Space plays the role of dimension fold.
 - ii). 1-space plays the role of boundary fold.
 - iii). 2-space plays the role of domain fold.
 - iv). 3-space plays the role of origin fold.
9. Four folds of Hyper cube-3
- i). 1 Space plays the role of dimension fold.
 - ii). 2-space plays the role of boundary fold.
 - iii). 3-space plays the role of domain fold.
 - iv). 4-space plays the role of origin fold.

10. Four folds of Hyper cube-4

- i). 2 Space plays the role of dimension fold.
- ii). 3-space plays the role of boundary fold.
- iii). 4-space plays the role of domain fold.
- iv). 5-space plays the role of origin fold.

11. Four folds of Hyper cube-N

- i). (N-2) Space plays the role of dimension fold.
- ii). (N-1)-space plays the role of boundary fold.
- iii). N-space plays the role of domain fold.
- iv). (N+1)-space plays the role of origin fold.

12. Domain boundary ration of Hyper cube N

$$A^n: 2N A^{n-1}$$

13. Geometric Envelope of Cube

- i). Boundary fold of cube is designated as geometric envelope of cube.
- ii). Geometric envelop cube is constituted by

(A) 6 surface

(B) 12 Edges

(C) 8 Corner points

14. Total structural components of cube

Total structural components of the setup of cube are:

- (A) 6 surfaces
- (B) 12 Edges
- (C) 8 Corner points
- (D) 1 Volume
- (E) 3 Axes
- (F) 1 Origin

15. NVF (Cube) = 31

16. TCV घन

(i). TCV (घन)=14

(ii). TCV (घन) $14+13=27$

(iii). $14= 2+3+4+5$, parallel to summation value of four fold manifestation layer (2,3,4,5) of Hyper cube-4.

17. Six place value format at boundary of Hyper cube-3.

(i). Six components of boundary of Cube provides a format for 6-place value system.

- (ii). Six boundary components of cube, permit organization as $6 = 2 + 4$ and parallel to it is the grid/Matrix 2×4 for placement of double digit numbers $2 \times 4 = 8$ of 3 place value system.
- (iii). Pair of numerals (1,2) of 3 place value system
- (iv). Also works out along binary system of geometric format of spatial order of pair of Axes of linear and spatial formats being availed by Pingala Chand Vedanga.

18. Split of cube

- (i). Cube permits split as 8 sub cubes.
- (ii). this split of cube is parallel to split of 3-space into eight octants.
- (iii). Further this split is parallel to the format (1,2) leading to $(1^3, 2^3)$

19. Different roles of 3-space

- (i). Basic role of 3-space is as domain fold.
- (ii). 3-space plays the role of dimension

(iii). 3-space also plays the role of boundary of 4-space

(iv). Still further, 3-space also plays the role of origin of 2-space.

(v). Ahead, 3-space as well plays the role of transcendental base for the origin fold of hyper cube-1

20. 4x4 format for roles of 3-space.

0	1	2	3
1	2	3	4
2	3	4	5
3	4	5	6

21. North East diagonal,

(i). Along North East diagonal there are uniform values of 3-space.

(ii). This makes north east diagonal format being of affine features, as much as that throughout, at all stages it accepts value-3

(iii). The North East diagonal format is also of sequential attainments, as much as that it

sequentially of its own transits and transforms into different phases and stages of progression along north east diagonal itself as of sequential role of 3-space as dimension fold, boundary fold, domain fold and origin fold.

- (iv). Still ahead it transcends further and attains transcendental base role for 3-space.

22. Tri-shapta format with transcendence attainment along North East diagonal format of 4 x 4 grid/Matrix format of different roles of 3-space is reached as Tri-Shapta format parallel to the format (5, x 7) being of the feature of 5 space as dimension fold, 7-space as domain fold. Here It would be relevant to note that 5-space is a solid order space, as much as that 3-space plays the role of dimension of 5-space and the dimensional frame of 5-space is constituted by 5 solid dimensions.

23. (3,7) Tri- Shapta literally means 3 and 7.

24. 7 versions of cube

- (i). Cube accepts 7 versions.
- (ii). This is parallel to representative bodies of 7 geometrics of 3-space
- (iii). 7 versions of cube sequentially accept surface plates as (6,5,4,3,2,1,0) with summation value
 $(6+5+3+2+1+0)=21=3 \times 7$

25.9 points fixation of cube

- (i). cube accepts fixation in terms of 9 points, of which eight are the corner points and ninth is the centre which is the seat of origin of 3 dimensional frame and as such is the seat of 4-space which maintains the integrity of the volume of the cube.
- (ii). Centre at '0' value, sequentially shall be tracing values '1,2,3', only prime triple parallel to the format of interval, square and cube making quadruple of hyper cubes 0,1,2,3.
- (iii). This as such shall be making out solid folds within solid folds like orbital within orbits, a repeated manifestation

process, where by eighth sub sub cubes of eight sub cubes shall be remaining integrated as ninth sub cube of the cube and there being a fixation of cube in terms of nine sub cubes of above structural interlinking formats.

26. Half dimensional frames within corners of cube

- (i). within each corner point of cube is imbedded a 3-dimesional frame of half dimensions.
- (ii). Orientation of each dimension is of inward format.
- (iii). Each edge, as such becomes a format for a pair of dimensions of opposite orientations making middle point of the edge being of a neutralized state.

27. Split of a three dimensional frame.

- (i). 3-dimensioal frame of full dimension is imbedded with origin at centre of the cube.
- (ii). The 3-dimensional frame imbedded at centre of the cube is of full dimensions.

- (iii). 3 dimensional frame of full dimensions imbedded at origin of the cube is a synthetic setup of a pair of 3 dimensional frames of half dimensions.
 - (iv). As such, because of spatial order of origin of 3 dimensional frame, it splits into a pair of 3 dimensional frame of half dimensions.
28. Synthetic setup of a 3 dimensional frame.
- (i). 3 dimensional frame is a synthetic setup of a origin and 3 dimensions.
 - (ii). Origin is of a spatial order (2-space in the roll of dimension of 4 space! and origin being a point of 4-space.
 - (iii). Each dimension with its neutralized middle point at centre of the cube splits dimension into a pair of half dimensions.
 - (iv). With it, 3-dimensional frame of 3 dimensions becomes a synthetic setup of a pair of 3 dimensional frames of half dimensions.

29. Split of a 3 dimensional frame

- (i). Split of 3 dimensional frame is there because of spatial order of the origin.
- (ii). Because of it, each dimension splits into a here of half dimensions.
- (iii). Origin itself, being of a spatial order setup, which itself leads to $2=(0,0)$ splits the origin into a pairs of origins.
- (iv). The split of origin into a pair of origins because of the format and features of spatial order parallel to $(2 =0,0)$, the same, amounts to a release of a solid order at the base of the origin.
- (v). solid order 5 space is at the base of spatial order 4-space origin.
- (vi). Solid order of 5-space constitutes 5 dimensional frame of 5 solid dimensions.
- (v). each solid dimension of a 3 dimensional frames of dimension itself splits into a pair of 3 dimension frames of half dimensions and thereby making it a setup of 10 three dimensional frame

of half dimensions parallel to eight three dimensional frames of half dimensions imbedded in 8 corner points plus 2 three dimensional frames of half dimensions available as a pair of parts of three dimensional frames of full dimensions imbedded at centre of the cube.

30. Transcendental chase

- (i). Let us sit comfortably and chase above features of the setup of 10 three dimensional frames of half dimensions.
- (ii). Solid order dimensional frame of transcendental domain is constituted by 5 solid dimensions as synthetic setup of 10 three dimensional domains of half dimensions.

31. Spatial formats for dimensions

- (i). 3-space is a linear order space

(ii). However these linear dimensions are of a spatial format.

(iii). It is because of this spatial format that cube splits into eight sub cubes.

(iv). And 3-space splits into eight octants.

32. Hyper cube format for each dimension

(i). 3-space accepts a dimensional frame of linear order.

(ii). each dimension of a 3-dimensional frame is of the format of Hyper cube-1.

(iii). Hyper cube-1 is of four folds (-1,0,1,2)/(-1 space in the role of dimension, 0-space in the role of boundary, 1-space in the role of domain, 2-space in the role of origin.

(iv). It is because of 2-space in the role of origin that each dimension of 3-space is of a spatial format.

33. Cube as Hyper cube-3.

34. Cube is of the format of hyper cube-3 format because of spatial format of its dimensions.

(i). spatial format provides and leads to spatial order (2-space in the role of dimension) for the manifestation format of cube.

(ii). This makes manifestation of cube as Hyper cube-3 because of its spatial format which of the features of four fold manifestation (2,3,4,5)/ 2-space as dimension, 3-space as boundary, 4-space as domain, 5-space as origin.

35. Syntheses and split of dimensional order

(i). The dimensional order of 1-space is (-1) space.

(ii). (-1 space, -1 space = (1 space) is the synthetic rule for the dimensional order of 1-space.

(iv). The Hyper cube-1 format as such as (-1, 0,1,2) shall be working out as per the syntheses rule $\{(-1,0,1,2),(-1,0,1,2)\} = (1,2,3,4)$

36. The above value amounts to Hyper cube-3 format splitting into a pair of Hyper cube-1 formats.

(i). Also, the other way round, it is parallel to a pair of Hyper cube-1 formats synthesizing a hyper cube-3 format.

(ii). In journal a pair of hyper cube N formats synthesize a (N+2 format).

(iii). And, the other way round, hyper cube N format splits into a pair of hyper cube (N-2) formats.

37. Syntheses reach of pair of hyper cube-2.

(i). Hyper cube-2 is a fourfold manifestation layer (0,1,2,3) with summation value $(0+1+2+3)=6$.

(ii). Summation of value for a pair of hyper cube-2 manifestation layers together comes to be $6+6=12$.

(iii). However a pair of hyper cube-2 formats synthesize hyper cube-4 format of manifestation layer (2, 3, 4, 5) with summation value $(2+3+4+5)=14$.

(iii). One may have a pause here and take note that artifices pair (12,14) format is parallel to a format of (dimension fold, domain fold)

38.Syntheses of a pair of hyper cube-3 formats.

(i). summation value of four fold manifestation layer (1,2,3,4,) of hyper cube-3 comes to be $(1+2+3+4)=10$.

(ii). As such summation of value for a pair of manifestation layer of hyper cube-3, comes to be $10+10=20$.

(iii). However the summation value of format of hyper cube-5 synthesized by a pair of hyper cube-3 comes to be $(3+4+5+6)=18$.

(iv). Here It would be relevant to note that artifices pair (20,18) is parallel to the format of (domain fold, dimension fold).

39.Comparative features of synthetic setups of a pair of formats of hyper cube-2 and of hyper cubes-3.

(i). As above, the synthetic value feature in case of hyper cube-2 comes to be parallel to artifices pair (12,14), which is parallel to the format of dimension fold, domain fold).

(ii). On the other hand synthetic value features in case of hyper cube-3 is parallel to the format of artifices pair

(20,18) which is parallel to (domain fold, dimension fold).

(iii). One may have a pause here and take note that in case of hyper cube-2 the reach is from dimension fold to domain fold, while in case of hyper cube-3, reach is back from domain fold to dimension fold.

(iv). One shall further have a pause here and permit the transcending mind to be phase to phase with these features of opposite orientation in case of the synthetic setups of a pair of hyper cube-2, on the one hand and of a pair of hyper cube-3, on the other hand

40. Creative and transcendental format

(i). A pair of hyper cubes-2 synthesize a creative format (of hyper cube-4 format and features).

(ii) A pair of hyper cubes-3 synthesizes a transcendental format (of hyper cube-5 format and features).

(iii). One shall sit comfortably and be face to face with creative and transcendental format.

41. Caged space at internal structures of cube

(i). There are four internal diagonals of cube.

(ii). There are a pair of 3 dimensional frames of half dimensions imbedded at the end points of the end point of each diagonals.

(iii). The inward translation of such pair of 3-dimensional frames, with reach for their origins (end points of diagonal/corner points of the cube) at centre of the cube as middle point of the diagonal, shall be synthesizing this pair of 3 dimensional frames of half dimension into a 3 dimensional frame of full dimensions.

(iv). One shall sit comfortably and be face to face with such translation and syntheses of a pair of 3 dimensional frames of half dimensions into a 3 dimensional frame of full dimensions.

42. A set of five 3 dimensional frame of full dimensions at centre of the cube.

(i). Translation of a pair of 3 dimensional frame of half dimension along the diagonal coordinating them shall be leading to a 3-dimensional frame of full dimension at centre of the cube.

(ii). Like that there would be and availability of four three dimensional frames of full dimensions and centre of the cube because of the availability to four such internal diagonals

(iii). Fifth three dimensional frame of full dimensions is already available at centre of the cube because of which the integrality of the volume of the cube stands maintain.

(iv) With it there emerges is setup of five 3-dimensional frame of full dimension at centre of the cube.

(v). one shall sit comfortably and permit the transcending mind be face to face with this format and features of internal structure

space caged within cube as volume of the
cube.

Dr.S.K.Kapoor

To be continued

12.05.2015

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SECTION 3

1

TEXTS BOOKS

(I)

VEDIC MATHEMATICS TEXT BOOKS

CLASSES IX, X, XI & XII

1. High & Higher Secondary Schools Mathematics is of 4 years duration.
2. During these 4 years, it is aimed to cover Mathematics of 3, 4, 5 and 6-space. Mathematics bases of Sciences and Technologies of 3, 4, 5 & 6-space respectively.
3. Each dimensional space has distinct basis of its Sciences and Technologies.

4. During Class-IX it is aimed to teach Mathematics of 3-space as basis base of 3-space Sciences and Technologies.
5. Likewise during Class X, XI and XII, aim is to teach basis base Mathematics of 4, 5 & 6-space respectively for their respective Sciences and Technologies.
- 6 This, as such will bring at the centre of studies amounting to chase of dimensional bodies 3, 4, 5 & 6-spaces respectively.
7. With it, the format of 'Cube' as respective regular body of 3-space shall be the basic Mathematical format of basis base Mathematics to be covered during Class-IX.
8. Likewise Class-X shall be covering basis base Mathematics along the format of hyper cube 4, the representative regular body of 4-space.
9. Likewise Class-XI shall be covering basis base Mathematics along the format of hyper cube 5, the representative regular body of 5-space.
- 10 Likewise Class-XII shall be covering basis base Mathematics along the format of hyper cube 6, the representative regular body of 6-space.
11. This will be maturing the young minds for onward chase of existence phenomenon of our Solar universe as along formats of unity state (7-space/hyper cube 7), natural

state (8-space /hyper cube 8), Brahman state (9-space/hyper cube 9) and Par-Braham state (10 space/hyper cube 10), to graduate with perfect intelligence of intelligence systems.

12. And with perfected intelligence graduation shall be laying foundation for reaching the Vedic order and have a blissful life of universal order.
13. In this background, the text books writing project of Vedic Mathematics of High and Higher Secondary level is being conceived and is being attempted to reach at first outline of the same and it is submitted for consideration of senior sadhakas and scholars with the request that they shall pool in their wisdom for the worthy Vedic Mathematics Text Books for schools and for higher level.



(II)

NCER & T TEXT BOOKS

**(AS PER NATIONAL CURRICULUM
FRAMEWORK (NCF))**

1. **NCER & T TEXT BOOKS** are reached at as per the syllabus designed in consonance with National Curriculum Framework by Text Books Development Committee,
2. Class-IX Mathematics Text Book takes up 15 aspects/values of Mathematics under the topics heads: (1) Number Systems (2) Polynomials (3) Coordinate Geometry (4) Linear Equations in Two Variables (5) Introduction to Euclid's Geometry (6) Lines and Angles (7) Triangles (8) Quadrilaterals (9) Areas of Parallelograms and Triangles (10) Circles (11) Constructions (12) Heron's Formula (13) Surface Areas and Volumes (14) Statistics (15) Probability. In addition are 2 appendices (1) Proofs in Mathematics and (2) Introduction to Mathematical Modeling. ■

(III)

Vedic MATHEMATICS – A WORD WITH A TEACHER

1. Innocence of young mind is an affine state of mind. It is a natural state for intelligence inflow. As intelligence field is of a consciousness base so teaching is to be of parallel

features of learning potentialities of the pupils. Here when the number values are to be taught with geometric formats, as such we have to be extra conscious that the geometric formats do not create any sort of mental blocks.

2. Learning numbers values along the geometric formats in one way will facilitate comprehension for young minds because of the association of numbers values with concrete shapes of geometric objects. However, at the same time there is equal apprehension that the shapes of the object may ultimately create parallel mental states, whose melting in itself will become an exercise in itself.
3. To meet the situation the teaching technology is to imbibe the feature of simultaneous approach to geometric formats in terms of values of numbers. This both ways reach, firstly from numbers values along geometric formats, and secondly the reach for geometric format being in terms of numbers values is going to be of great help to have proper intelligence growth for the young minds.
4. This technology feature of numbers values reach is to be along geometric formats while reach for geometric format is to be in terms of numbers values is the technology of simultaneously availing Yoga Nishtha and Sankhya Nishtha. The simultaneous availability of parallel organizations of numbers values and geometric formats is the basic virtue whose inculcation is going to be the index of proficiency attainment of Vedic Mathematics Teacher. The teaching range for young minds, as it is being of values of 3, 4, 5 and 6 spaces and further as it is to be covered in sequentially progressive phases and stages over four years duration as class 9 to class, 12 syllabi, as such at every step learning and

teaching values have to take care as that there is a smooth progression throughout and transition and shift from one stage of learning and teaching as of 3-space frame to 4-space frame and so on to 5-space frame and 6-space frame as well is to be in a most natural coordination.

5. Initiation for chase of values of existence phenomenon within 3-space frame, as such may appear to be of most natural environment of learning by young minds. However here there is a big danger of cementing a mental state for the young mind to emerge as a hard block as 3-space frame is the only space frame and that there is nothing beyond that. It is this along to which Vedic Mathematics teacher is to ever remain conscious, as 3-space is of a linear dimensional order. And, linear dimensional order has its inherent limitations which restrict it to be of the range of seven geometries parallel to which are seven versions of cube. And the same starts osculating and one gets trapped of approaching cube within a cube, while the requirement would be that the limitations of linear order to be transcended to the spatial order of 4-space.
6. It is all right that during class 9 learning and teaching the aim is that the intelligence field of young minds is to be exposed to the existence phenomenon within 3-space frame, but at the same time it is also to be taken care of the danger of such exposure may not create a mental state as that transcendence there from will become difficult. No doubt, the exposure to spatial order of 4-space is going to be there during learning and teaching

next year in class 10 but the necessary background deserves to be created during last quarter of learning and teaching in class 9 by exposing such features of the set up of cube, particularly about the uniqueness of its center being the seat of collapse of the inner most corner points of eight sub cubes synthesizing the cube itself. Further as that center of cube is the meeting point of all the four internal diagonal of a cube and that these diagonals are the translation paths of the three dimensional frames of half dimensions imbedded in the respective corner points of the cube as end points of the concerned diagonals. Like that, initial exposure for the anticipated structural set up for the volume part of the cube deserves to be pointed. Still further it also to be hinted with focus as that the corner points of the cube are the origins of three dimensional frames while the second half of a three dimensional frame here is in unmanifest state because of the different order of the outside space.

7. This timely exposure initiation will be of great help for the young minds to have smooth transition from linear order of 3-space frame to the spatial order of 4-space frame existing in continuity as an integrated set up for the existence phenomenon within our solar universe. The same challenge would again become the responsibility of Vedic Mathematics teachers when with very conscious efforts young minds are to be timely exposed for smooth transition from spatial order frame of 4-space to solid order frame of 5-space. And a step ahead to have smooth transition from solid order of 5-space frame to creative (hyper) order of 6-space.

8. As for transition from linear order of 3-space frame to spatial order of 4-space, help is to be had of the set up of 'cube' as representative regular body of 3-space, a step ahead for initial exposure for transition from set up of spatial order of 4-space frame to solid order of 5-space frame, help is to be had of hyper cube 4, being the representative regular body of 4-space and a step ahead help is to be had of hyper cube 5, the representative regular body of 5-space for attaining transition for creative (hyper) order of 6-space. The success tests of learning and teaching of dimensional orders of 3, 4, 5, 6 spaces is going to be parallel to the comprehension and imbibing of the values of reality of 3, 4, 5 and 6 spaces themselves. These spaces namely 3, 4, 5 and 6 are the real spaces. These are not mental constructs. These are the reality of our solar universe. For the existence phenomenon on earth our existence phenomenon within human frame is coordinated along the format of Shad Chakras (six eternal circuits) which are the real domains to 1 to 6 space bodies.
9. The constant reminding to oneself will help one to melt the sequential emergence of the mental states during initial formative years of young mind. The learning and teaching of Vedic Mathematics, that way is aimed to have natural growth for the young minds, which are initially fulfilled with affine state of innocence and same soon gets fulfilled with consciousness based intelligence. Vedic mathematics learning and teaching helps in the process for the young minds to be perfectly formatted along consciousness based intelligence field. Parallel to the reality of existence frame within space of our solar universe meant for existence phenomenon within human

frame.



(IV)

MATHEMATICS OF SPATIAL ORDER

1. Mathematics of linear order

1. Mathematics of linear order approaches existence phenomenon within space in terms of 3 dimensional frames of 3 linear dimensions.
2. With inherent limitations of linear dimensional order, the reach within 3 dimensional frame takes uptill 7 geometries range of 3-space, parallel to which are 7 versions of cube making them representative bodies of 7 geometries of 3-space.
3. Because of it hyper circle increase uptill hyper circle 7 and beyond that hyper circle 8 onwards decrease.
4. To transcend the limitations of linear order there is to be transition from linear order to spatial order.

2. Mathematics of Spatial order

1. Mathematics of spatial order approaches existence phenomenon within space in terms of spatial dimensional frame of 4 spatial dimensions.
2. The linear dimensional order with availability of linear (1-space/interval) format avails line as a formatted set of infinite points.
3. On the other hand, the spatial dimension with availability of formatted infinite lines with each line itself being a formatted set of infinite points makes the spatial dimension format being the format of infinite sequence of infinite sequences.
4. This value of spatial dimension has the advantage of transcending limitations of linear order. In fact the spatial order format inherently is acquiring potentiality of formatting whole range of dimensional frames.

3. Square and circle:

1. Square and circle, both are the representative regular bodies of 2-space.
2. Domain boundary ratio in both cases accepts common formulation $A^2 : 4b^1$
3. In case of square, its domain (Area) = A^2 , makes its perimeter = $4A^1$.
4. In case of circle, its domain (Area) = $\text{Pi} \times R^2$ while its circumference (boundary) = $2 \times \text{Pi} \times R^1$.
5. By accepting $D = 2R$, the domain comes to be $\text{Pi} \times D^2/4$ and boundary comes to be $\text{Pi} \times D$.
6. Domain boundary ratio for circle becomes $D^2 : 4D^1$

4. Sequential synthesis of dimensional order:

1. Taking dimension emanating from origin parallel to radius of a circle with its one end at the centre of the circle and other end at the circumference, will lead us to other end of the dimension in the outer space.
2. Let value of the dimension is being '**M**'.
3. Let there be a pair of dimension of value **M** each.
4. The synthesis value of a pair of dimension values will require accommodation for the value which is to be provided for bridging the gap between the pair of end points of these dimensions in the outer space. And the value of the dimension except for its pair of end points would come to be **(M-2)**.
5. Accordingly the synthesis value for pair of dimensions of value **M** each after accommodating for the gap bridging value between the outer space end points of the pair of dimensions would come to be : $[(M+M) - (M-2)] = M+2$
6. Let us have a pause here and to take note that :
 - i) Value of single dimension = **M**
 - ii) Synthesis value of a pair of dimension = **M+2**.
7. Now when third dimension will synthesize with the synthesized pair of dimensions, it shall be contributing value **M and** further it shall be requiring accommodation for bridging the gap for the outer end point of third dimension with outer end points of both the dimensions which will come to be $2(M-2)$ value and as a net result the added value because of third dimension will come to be $[M-2(M-2)]$. And with it the synthesis value of all the three dimensions will come to be $\{M+2 [M-2(M-2)]\} = 6$.
8. Let us have a pause here and recapitulate that
 - i) Value of first dimension = $S(1) = M$

- ii) Synthesized Value of 2 dimensions = $S(2) = M+2$.
- iii) Synthesized Value of 3 dimensions = $S(3) = 6$.
- 9. Now the synthesis of fourth dimension with the synthesized 3 dimensions will have addition of value M and same will at the same time require adjustment for the gap bridging value for the outer end point of fourth dimension with the outer end point of first 3 dimensions which will come to be $3(M-2)$ and as a net result the total addition because of fourth dimension would be $M-3(M-2)$.
- 10. And with it the synthesis value of four dimensions will come to be $S(4) = S(3) + M - 3(M-2)$.
- 11. In general synthesis value of N dimension $S(N) = S(N-1) + N - (N-1)(M-2)$.

5. Dimensional synthesis values sequence:

- 1. Dimensional synthesis values sequence $\{S[M, N]\}$ for dimensions of order M is of values sequence $\{S(N)\}$ for $N = 1, 2, 3, \dots$.
- 2. The sequence of dimensional synthesis values sequences $\{S[M, N]\}$ is of whole range of dimensional orders ($M = 1, 2, 3, \dots$) and for synthesis of any number of dimensions ($N = 1, 2, 3, \dots$).
- 3. $M=1$ and $N = 1, 2, 3, \dots$ will lead to synthesis values sequence of linear order and it comes to be $(1, 3, 6, 10, 15, 21, 28, \dots)$.
- 4. $M=2$ and $N = 1, 2, 3, \dots$ will lead to synthesis values sequence of spatial order and it comes to be $(2, 4, 6, 8, 10, 12, 14, \dots)$.

5. $M=3$ and $N = 1, 2, 3, \dots$ will lead to synthesis values sequence of solid order and it comes to be $(3, 5, 6, 6, 5, 3, 0, \dots)$.
6. $M=4$ and $N = 1, 2, 3, \dots$ will lead to synthesis values sequence of hyper (4) and it comes to be $(4, 6, 6, 4, 0, \dots)$.
7. Like that is the reach of every dimensional order for synthesis of any number of dimensions of that order.
8. The restriction for positive orders only is no more there and M accepts zero and negative values as well.
9. This reach of values (positive, zero and negative) will accommodate extension from radius to diameter.
10. Parallely is the format of square accepting a two dimensional frame of half dimension in each corner point.
11. As well dimensional frame of 2-space accepts a split into a pair of 2 dimensional frame of half dimension with origin at the centre of the square.

6. Values triple $(M, M-1, M-2)$.

1. Close interval format for dimension of order M will lead to value M for its whole set up.
2. Half close interval because of its missing one end point will accept its value format as of value $(M-1)$.
3. Open interval because of both end points missing will accept association of value $(M-2)$
4. M^2 as the value of whole set up of square including boundary of 4 components (boundary lines) being of value 4 $(M-1)$ will lead to value for square surface area excluding boundary being $(M-2)^2$.

5. The equation $M^2 = (M-2)^2 + 4(M-1)$ will help us comprehend and appreciate as to how the square surface area $(M-2)^2$ with addition and subtraction of value $(M-2)$ shall be providing us a sequential reach in terms of the gap value between the pair of end points of pair of dimensions in the other space.
6. Further the equation $(M-1) \times (M-2) = M^2 - 3M + 2 = (M-2)^2 + (M-2)$ is parallel to the gap values accommodation needed for synthesis of M^{th} dimension with the previously synthesized $(M-1)$ dimension.
7. In general this accommodation value is $(M-1) \times (M-2)$.

7. One shall sit comfortably and permit the transcending mind to glimpse and imbibe values of this organization format of spatial order.

1. Interval, big or small, formats infinite points.
2. Surface big or small, formats infinite lines.
3. Points, may be of lines, surfaces, solids or of hyper solids, infinite of them get formatted along and as a line.
4. Lines of points, may be of lines or of surfaces or of solids or of hyper solids, infinite of them, get formatted along a surface.

This formatting of infinite sequence of infinite sequences feature of spatial order of a dimensional frame of 4 spatial dimensions, parallel to square as a set up of 4 quarter squares and with synthesis of 3 quarter squares, fourth manifesting of its own because of the availability of the outer square makes a mathematics of spatial order not only making 3 quarters (and hence of 3 dimensions) as a special case of spatial order Mathematics, but also ensures transcendence from the

limitations of linear order Mathematics of 3 dimensions frame
for the space for chase of existence phenomenon within space.



**VEDIC MATHEMATICS
TEXTBOOK CLASS IX**

SECTION-1

1

TECHNICAL TERMS

(I)

3-SPACE MATHEMATICS

TECHNICAL TERMS

1. 3-space.
3-space is a space within a 3 dimension frame of 3 dimensional layer and cube and sphere being its representative regular bodies.
2. 3 dimensional frames.
3 dimensional frame is set of 3 dimensional layers and an origin.
3. Linear dimension.

- 1-space plays the role of dimension.
4. 3-space content.
3-space content within a 3 dimensional frame is designated as 3 space contents.
 5. 3-space body.
3-space contain manifest a 3 space body.
 6. Representative regular body of 3-space.
A 3-space body which does not refer any dimension on any other any dimension is designated representative of a regular body. Cube is the representative of 3-space body any dimension on any other dimensional. Likewise sphere is also a representative a regular of 3-space as sphere also is not preferring any dimension any other dimension.
 7. Hypercube 3.
Hypercube 3 is a 3-space body with 1 space playing the role of dimension, 2-space playing the role of boundary, 3-space playing the role of domain, 4-space playing the role of origin. Cube is hypercube 3.
 8. Linear dimension.
Linear dimension means 1-space playing of dimension.
 9. Spatial boundary.
Spatial boundary means 2-space playing a role of boundary.
 10. Solid domain.
Solid domain means 3-space playing role of domain.
 11. Creative origin.
Creative origin means 4-space the playing the role of origin.
 12. Transcendental base.
Transcendental base means 5-space playing the role of base of origin fold of hypercube.

13. Self referral format.

Self referral format means 6-space playing the role of format for base of transcendental base.

14. Unity space.

Unity space means 7-space playing the role of unity state of self referral format.

15. Natural resource.

Natural resource means 8-space as source of unity state.

16. Burhman reservoir.

Burhman reservoir means 9-space as reservoir of natural sources values.

17. 3 dimensional frame:-

- 1) 3 dimensionals frame is setup 3 linear dimension and one origin.
- 2) 3 dimensional permits split into a pair of 3 dimensional frames of half dimensions of opposite orientations.
- 3) Within each corner point of a cube is imbedded a 3 dimensional frame of half dimensions. One 3 dimensional frame of full dimension is of a placements with origin at the seat of center of cube.
- 4) Each corner point of cube is a seat of origin of a 3 dimension frame of half dimension imbedded here with origin of placement at the corner point.
- 5) The second dimensional frame of half dimension is in unmanifests form. It may be said that the second 3 dimensional framed of half dimensional owns its existence but is not barking its presence here.
- 6) This unmanifest 3 dimensional frame of half dimension, as such is designated as a black 3 dimensional frame of half dimensions, while the first

- 3 dimension frame of half dimension is designated as white dimensional frame.
- 7) While 3 dimensional frame has in word orientations for its axes, while white 3 dimensional has its orientation outwards.
 - 8) Black 3 dimensional frame is in the outward space, a four space outside the 3-space body (cube).
 - 9) White 3 dimension frame is within 3-space itself, at the boundary of 4-space.
 - 10) 8 white 3 dimensional frame with origin at corner point of cube and ninth 3 dimensional frame with in cube itself with the origin of centre of cube sustain 3-space body in an integrated state.

(II)

SPACE AND SPACE CONTENTS

1. Space is the 5th element.
2. First four elements are earth, water, fire, air.
3. These five elements 'earth, water, fire, air and space' are the designated as punch maha-bhut accepts transcendental code value 40.
4. The number value 40 is parallel to 40 coordinate fixations of creative boundary of transcendental domain (4-space) of ten components as boundary of transcendental domain.
5. Formulation 'Akash' accepts transcendental code value '8'.
6. One may have a pause here and take note that $40 = (5 \times 8)$.

7. It would also be relevant to take note that formulation '*ek*' accepts transcendental code value '8'.
8. 5-space accepts a dimensional frame of 5 solid dimensions (3-space in the role of dimensions of 5-space).
9. Formulation '*tray*' as well accepts transcendental code value '8'.
10. Formulation 'Punch' accepts transcendental code value '15'.
11. One may have a pause here and to take note that the dimensional value of 5 solid dimensions (3-space as dimensions) leads to $(3 \times 5) = 15$ values.
12. It would further be relevant to take note that 1-space play the role of dimension of 3-space, 2-space play the role of dimensions of 4-space, 3-space play the role of dimension of 5-space, 4-space play the role of dimensions of 6-space.
13. One may have a pause here and to take note that linear order four folds manifestation layer (1, 2, 3, 4) of hypercube 3 is of a summation value $(1+2+3+4) = 10$.
14. Further as that solid order manifestation layer $(3+4+5+6)$ of hypercube 5 leads to summation value $(3+4+5+6) = 18$
15. It is this relationship of hypercube 3 with hypercube 5 which deserves to be comprehended well to appreciate dimensionalization of space.
16. One of the basic features of this dimensionalization is that space as space content sequentially unfolds itself as a range of hyper cubes of simultaneously manifestation of 4 consecutive dimensional spaces contents illustratively 1-space (as 1-space contents), 2-space (as 2-space contents), 3-space (as 3-space contents), and 4-space (as 4-space contents) simultaneously manifests as hypercube

- 3 with 1-space contents playing the role of linear dimension, 2-space contents playing the role of a spatial boundary, 3-space contents playing the role of a solid domain and 4-space contents playing the role of origin fold of hypercube 3.
17. In general hypercube N is a set up of a four folds manifestation layer $(N-2)$ space being dimension fold, $(N-1)$ space being boundary fold, (N) space being domain fold, $(N+1)$ space being its origin fold.
 18. One shall sit comfortably and permit the transcending mind to glimpse space as a space content unfolding itself at creative boundary of transcendental domain as a manifested range of hypercube of 4 folds dimensional space contents.
 19. One may further have a pause here and to take note that one of the basic feature of dimensional space (content) is that it distinctively place, at a time the role of a distinct fold of manifested creations as of hypercube formats.
 20. It is this feature of space content deserves to be comprehended well.

(III)

BASIC POSER AND ELOBRATION

1. Define 3-space.
Space approached by a dimensional frame 3 linear dimension is designated '3-space'.
2. Elobrate 3 dimensional frame

- 1-space in the role of dimension makes a linear order. 3 linear dimensions synthesis a 3 dimensional frames. Synthesis of dimension is there because of availability of spatial order for the common origin for all the 3 dimensions.
3. What are the features of origin of a 3 dimensional frame
2-space plays the role of supplier of structures for the origin placed within creator space (4-space).It is a spatial order phenomenon of 4-space within reach is seated origin of 3 dimensional frame.
 4. An elaborate role of 1-space as dimensions of 3-space
Here 1-space means 1-space content the referred role of 1-space, in fact, is the role of 1-space content.
 5. Elaborate 1-space content
Space as space content permits approached to it in terms of dimensional frames. When space is approach by single dimension, by space comes within comprehension as one space and the domain fold content of 1-space body becomes the expression of 1-space contents

(IV)

3-SPACE MATHEMATICS

BASIC POSER AND ELOBRATION

1. What is the domain of 3 space mathematics?

It is all about the mathematical reachable values are 3-space.

2. **What is the values range of 3-space?**

It is parallel to space reachable by a linear order.

3. **What are the features of a linear order?**

1-space content in the role of dimension makes a linear order. 3 linear dimensions synthesis a 3 dimensional frame.

4. **How linear dimensions synthesis as a dimensional frame?**

The availability of common origin of spatial structure results into synthesis of a 3 dimensional frames as a setup of 3 dimensions and a common origin of spatial order.

5. **What is the virtue of one space content?**

Space content when is approached by a single dimension it permits its comprehension and reach as 1-space contents.

3-SPACE MATHEMATICS VALUES COMPILATION

(I)

PRELIMENARLY

1. 3-space is a linear order space it manifest a hypercube 3 format.

2. Hypercube 3 format is four folds format of 1-space as dimensional fold, 2-space as boundary fold, 3-space as domain fold and 4-space as origin fold.
3. 3-space domain as a framed domain with a sealed origin, in its dynamic state swaps outside space on a special (boundary) format.
4. Within framed 3-space domain of a sealed origin, the chase of 3-space body in static as well as in dynamic state bring to focus the features of 3-space contents lamb and as discrete entities, as well as a continuum phenomenon.
5. 2 fold frames of 3-space domain firstly as a dimensional frame and secondly as a spatial enveloping frame, have there distinct roles in the existence phenomenon of 3-space.

(II)

3-SPACE MATHEMATICS WORKS OUT THE EXISTENCE PHENOMENON OF 3-SPACE

1. 3-space mathematics is basis base mathematics of 3-space VMS & T.

(III)

BASIS BASE SUTRAS

1. Athrav Ved Ganita Sutras and upsutras are the basis base sutras of mathematics of the discipline of Vedic Mathematics, Science & Technology.
2. Vedic Mathematics, Science & Technology as a reached at dimensional space wise distinct values.
3. Ganita Sutras and upsutras help reach at dimensional space wise distinct values of Mathematics, Science & Technology.
4. As such, Ganita Sutra and upsutras are the basis base sutras of 3-space mathematics as well.
5. The basic approach mathematical domain in sequential phases. Arithmetic is approach in algebraic format, algebra is approach in geometric format, geometry of manifestations format, manifestations are approached upon transcendence format which sequentially go self-referral, and of unity state with natural source reservoir been fountained from Brahman virtues.
6. Measures as well go transcendental generation way as counts, units, strings, layers, ranges, folds and of cyclic orders.
7. 3-space mathematics domain focus upon counts and units taking counts as measures for pre dimension roles and units being of dimensional domains.
8. A step head, transcendence through origin fold as its reach up till the base fold, as the fifth fold. It infects amounts to transition and transformation for the linear order into spatial order. And like that, sequentially the transcendence through compactified origins take ahead and ahead.
9. The general outline of Teaching and Learning of Vedic Mathematics may of following features.



TEXT BOOK CLASS IX

SECTION-2

1

GANITA SUTRAS 1 & 2 AND

GANITA UPSUTRAS 1 & 2

(I)

GANITA SUTRA 1 AND GANITA UPSUTRA 1

1. With the help of Ganita Sutra 1 and Ganita Upsutra 1, one shall reach at sequential arrangements for values.
2. First of all, one may pose to oneself the similarity and dissimilarity of feature and value in respect of the formulation of following setup:
(One, first, single, sole, lone, along, lonely, oneness ...).
3. Further, one shall glimpse and imbibe the similarity and dissimilarity of following values setups:
(1, 1^0 , 1^1 , 1^{-1} , $1/1$, $2/2$, $3/3$, $(N \times M) / (N \times M)$, $(N \times 1) / 1 \times N$...).
4. To number the milestones, to number the roads, to roles out roll numbers ...
5. To sequential, polygons, to sequence cuecue.

6. To sequence variables and degrees of equations.
7. To sequence grids.
8. To sequence place value system.
9. To sequence geometric bodies, dimensional spaces, dimensional frames.
10. To construct a scale, to number thermometer, to construct measuring rods, to have numbers line, to have timeline, to sequence life span.
11. To distinguish unit length, unit area, unit volume.
12. To organized dictionary to prepare library catalogue of books.
13. To sequence numbers tables.
14. To sequence numerals.
15. To sequences finite strings.
16. To sequences infinite sequence of infinite sequences.
17. To sequentially unfold osculate.
18. To parallel sequence linear order and negative linear order.

VEDIC MATHEMATICS OF 3-SPACE

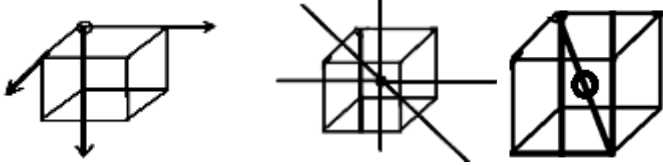
LESSON – 01

CUBE



1. Cube is a representative regular body of 3-space.
2. It is a regular body as here no axis is preferred over any other axis.
3. Cube has a geometric envelop stitched by 8 corner points, 12 edges and 6 surfaces making it a set up of $8 + 12 + 6 = 26$ structured components.
4. Volume of the cube as one another structural components makes the total structural components being $26 + 1 = 27$.
5. Number value 27 accepts re-organization as $27 = (3 \times 3 \times 3) = 3^3$.
6. Corner points are of 'zero volume, zero area and zero length'.
7. Edges are of 'zero volume and zero area'.
8. Surface plates are of 'zero volume'.
9. Volume avails all the three axes.
10. Surface avails a pair of axes.
11. Edge avails a single axis.
12. Corner points are devoid of all the axes.
13. Each corner points are a meeting point three edges.
14. Each surface is enveloped by four edges.
15. Volume is enveloped by geometric envelope stitched by 8 corner points, 12 edges and 6 surfaces.
16. Cube accepts 4 internal diagonals.

17. These internal diagonals meet at a point designated as center of the cube.



18. In each corner point meet three edges, which also play as axis.
19. At center of the cube can be embedded a dimensional frame of three axes.
20. These three axes and center of the cube as origin of three dimensional frames make a set of 4 structural components.
21. These four structural components (three axes and fourth origin / center) together with other 27 structural components of the set up of the cube (8 corner points, 12 edges, 6 surfaces and 1 volume) together make out a set up of 31 structural components.
22. These 31 structural components together with 4 internal diagonals make out an extended set up of $31 + 4 = 35$ structural components. ■

LESSON 2

INTERVAL, SQUARE AND CUBE:

1. 3 dimensional frame structures space.
2. So structured space in terms of 3 dimensional frame of 3 axes lines is designated as a 3 space set up.
3. Cube is the structured body of this 3 space.
4. 3 axes sequentially structure interval, square and cube.
5. This sequential structuring by 3 axes is a sequential structuring of 3-space.
6. These 3 space structures become the structures within cube itself.
7. It leads to sequential reach of structured cube within a cube.
8. Single axis formats interval.
9. Pair of axis format square.
10. Cube is formatted by all the 3 axes.
11. Interval has length (A^1) and a pair of end point ($2A^0$).
12. These together make a set up $(A^1 + 2A^0)^1$.
13. Square has area (A^2), 4 boundary lines ($4A^1$) and 4 corner points ($4A^0$).
14. These structural components of square make a set up $(A^2 + 4A^1 + 4A^0) = (A^1 + 2A^0)^2$.
15. Structural component of cube are volume (A^3), 6 surface plates ($6A^2$), 12 edges ($12A^1$) and 8 corner points ($8A^0$).
16. This structural set up leads to $(A^3) + (6A^2) + (12A^1) + (8A^0) = (A^1 + 2A^0)^3$.
17. These structural components set ups of interval, square and cube accept common value formula $(A^1 + 2A^0)^n$, $N = 1 + 2 + 3$.
18. It would be interesting to note that cube structured within a cube will itself further accept another cube to be structured within it.
19. And this sequence may continue infinitely.
20. Likewise the square within a cube as well permit structuring of a square inside it.

21. And a step ahead there would be a reach for a structured square within the structured square within square within cube.
22. And this sequence as well may continue infinitely.
23. Likewise would be a situation in respect of intervals within a cube as well.
24. This will lead us to infinite sequence of intervals, squares and cubes within cube.



LESSON-3

POINTS OF INTERVAL SQUARE AND CUBE

1. Point of interval has length, howsoever small it may be.
2. Point of a square has area howsoever small it may be.
3. Point of a cube has volume howsoever small it may be.
4. Line within a cube is a set up of points of a cube.
5. Square within a cube is a set up of the point of the cube.
6. This will help us distinguish points of interval within cube and of an interval outside the cube.
7. Likewise, it will also help us distinguish point of a square within a cube from that of a square outside the cube.
8. Likewise the point of interval within square is distinguishable from the point of interval outside the square.
9. Further interval provides a format for setting of the points devoid of length.

10. Likewise square provides a format for setting of points devoid of area, as well as devoid of length.
11. Cube provides a format for setting of points devoid of volume, as well as devoid of area and also devoid of length.
12. It would be a blissful exercise to distinguish interval as a format for setting of points devoid of length from the interval as the set up of points imbedded with length, howsoever small the same may be.
13. A step ahead, it would be a blissful exercise to distinguish square as a format for setting of points of interval devoid of area from that of a square as a set up of points imbedded with area howsoever small it may be.
14. And further it would also be a very blissful exercise to distinguish cube as a format for setting of surface plates devoid of volume from that of cube as a set up of point imbedded with volume howsoever small the same may be.



LESSON -4

CONCEPT OF STRUCTURED POINT

1. The concept of a structured point is the basic concept.
2. Point of a line is imbedded with the structures of a line.
3. The point of square is imbedded with the structures of an area.
4. Point of cube is imbedded with the structures of volume.
5. Point devoid of structures of volume is not the point of cube

6. Point devoid of structures of area is not a point of square.
7. Point devoid of structures of length is not a point of an interval.
8. A point devoid of structures of volume, area and length may be designated as a void point or a point simplistic, outside the 3 dimensional frames.
9. Point within a 3 dimensional frame may get fulfilled with structures because of a single axis and by a pair of axes and even due to the presence of all the 3 axes.



LESSON-5

DUAL STATUS OF CENTRE OF A CUBE

1. Centre of the cube is uniquely placed being at an equal distance from all the corner points of the cube.
2. This unique placement of centre distinguishes it from all other points of the cube.
3. This uniqueness makes centre to be of a dual status, firstly like all other points of the cube and secondly because of its uniqueness from all other points of the cube.
4. Centre of the cube is the collapse point of all the corner points of the cube.
5. In fact centre is the collapse point of the cube itself.
6. Cube is the seat of inner most corner points of all 8 sub cubes of the cube.
7. This way centre of the cube gets enveloped by super imposition of the inner most corner point of the sub cubes.
8. This makes 9 point fixation for the centre of the cube.
9. Placement space of the centre of the cube with its enveloping by 8 inner most corner points of sub cubes makes centre of the cube as a placement seat devoid of the structures of the cube points.
10. This status of the centre of the cube as placement seat of space beneath the centre as point of the cube brings to focus the nature of dual status of the centre of the cube.
11. This makes status of centre of the cube being parallel to the status of origin of dimensional frame of 3-space

- and also further being parallel to that of the origin of 3-space itself as well.
12. It brings to focus the feature of seat of centre of cube being enveloped within a solid boundary of 8 components (sub cubes of the cubes) itself.
 13. Cube itself is enveloped by 6 surface plates.
 14. Each surface plates of cube is enveloped by 4 intervals (edges) as boundary line of a square.
 15. Each edge is bounded by a pair of end points (corner points).
 16. It makes a blissful sequence that edges are bounded by a pair of corner points, surface plates are bounded by 4 edges, volume of the cube is enveloped by 6 surface plates and centre of the cube is enveloped by 8 sub cubes.
 17. It would be blissful to comprehend and imbibe this feature of pair of end points, 2 pairs of boundary lines, 3 pairs of surfaces and 4 pairs of solids (sub cubes). All marking their presence simultaneously in the structural set up of the cube as the representative regular body of 3-space within a 3 dimensional frame of 3 axes.
 18. It would be blissful to take note that these sequential values of 2 points, 4 lines, 6 surfaces and 8 solids at the boundary in fact are sequentially taking us to interval as 1 space body of single axis format, surface as a 2 space body of a pair of axes format, cube as a 3 space body of 3 axes format and ahead there being a 4 space body accepting solids at its boundary, while solid itself is accepting surfaces at its boundary and surfaces are accepting lines at their boundary and lines themselves are accepting points at their boundary.
 19. It is blissful that, that way, we have reached a step ahead of solids, a step which takes us in a space ahead of 3-

space.



LESSON-6

SYNTHESIS OF 2, 4 & 8 CUBES/

8 SUB CUBES AS A CUBE

1. A cube is a structural set up of 8 corner points, 12 edges, 6 surfaces and 1 volume, together making it a set up of 27 structural components.
2. When 2 cubes of 27 structural components each are synthesized together with one of the surface plate being the common separating surface for both the cubes, it shall be dispensing with the structural components of one of the surface plate.
3. One surface plate is (a square) is a set up of 9 structural components namely 4 corner points, 4 edges and 1 surface area.
4. Therefore, a pair of cubes of 27 structural components each, together making a set of $27+27= 54$ structural components, on their synthesis will get reduced to a synthetic set up of a pair of cubes being of $27+27-9= 45$ structural components only.
5. It may be taken as that the first cube contributes its all the 27 structural components while the second cube to contribute only $27-9= 18$ components only.
6. This synthetic set up of a pair of cubes, as of 45 structural components will be of following classification for these structural components:

Cube	Corner points	Edges	Surfaces	Volume	Total
First	8	12	6	1	27
Second	4	8	5	1	18
Total:	12	20	11	2	45

7. Now when third cube is synthesized with the above set up of a pair of cubes, there would be a further contribution of 18 structural components by the third cube.
8. One may note that while third cube will be synthesizing itself with the above synthetic set up of a pair of cubes, the structural component of one of the surface plate will get dispensed with.
9. The resultant structural component of synthetic set up of 3 cubes would be as of $27+18+18= 63$ structural components accepting classification as under:

Cube	Corner points	Edges	Surfaces	Volume	Total
First	8	12	6	1	27
Second	4	8	5	1	18

Third	4	8	5	1	18
Total:	16	28	16	3	63

10. Now when one more cube, namely fourth cube would be synthesized with the above synthetic set up of 3 cubes, the contribution because of the fourth cube would be only of 12 structural components, as in this situation 2 of the surface plates will get dispensed with.
11. As a result, the synthetic set up of 4 cubes will make a set up of 75 structural components accepting following classification:

Cube	Corner points	Edges	Surfaces	Volume	Total
First	8	12	6	1	27
Second	4	8	5	1	18
Third	4	8	5	1	18
Fourth	2	5	4	1	12
Total:	18	33	20	4	75

12. A step ahead, when fifth cube would be synthesized with the above synthetic set up of 4 cubes, it shall be contributing only 18 structural components and thereby making synthetic set up of 5 cubes being of $75+18 = 93$ structural components accepting following classification:

Cube	Corner points	Edges	Surfaces	Volume	Total
First	8	12	6	1	27
Second	4	8	5	1	18
Third	4	8	5	1	18
Fourth	2	5	4	1	12
Fifth	4	8	5	1	18
Total:	22	41	25	5	93

13. A step ahead, synthetic set up of 6 cubes is going to be a structural set up of 105 structural components of following classification:

Cube	Corner points	Edges	Surfaces	Volume	Total
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First	8	12	6	1	27
Second	4	8	5	1	18
Third	4	8	5	1	18
Fourth	2	5	4	1	12
Fifth	4	8	5	1	18
Sixth	2	5	4	1	12
Total:	24	46	29	6	105

14. . A step ahead, synthetic set up of 7 cubes is going to be a structural set up of 117 structural components of following classification:

Cube	Corne r points	Edge s	Surface s	Volum e	Tota l
First	8	12	6	1	27
Second	4	8	5	1	18
Third	4	8	5	1	18
Fourth	2	5	4	1	12
Fifth	4	8	5	1	18

Sixth	2	5	4	1	12
Seventh	2	5	4	1	12
Total:	26	51	33	7	117

15. Finally the synthetic set up of 8 cubes/sub cubes, as a cube shall be becoming a structural set up of 125 structural components accepting following classification:

Cube	Corner points	Edges	Surfaces	Volume	Total
First	8	12	6	1	27
Second	4	8	5	1	18
Third	4	8	5	1	18
Fourth	2	5	4	1	12
Fifth	4	8	5	1	18
Sixth	2	5	4	1	12
Seventh	2	5	4	1	12
Eighth	1	3	3	1	8
Total:	27	54	36	8	125

16. It would be blissful to take note that $8 = 2^3$ number of cubes synthesize a structural set up of $125 = 5^3$ number of structural components.
17. One may have a pause here that square as 2 space body as linear boundary of 4 components and this makes 5 versions of square parallel to presence of boundary components of 4, 3, 2, 1, 0 in number and it will help us acquire insight as to the feature of 2^3 number of cubes synthesizing a structural set up of 5^3 structural components.
18. It would be a blissful exercise to chase further as that $3^3 = 27$ cubes shall be synthesizing a structural set up of $7^3 = 343$ structural components.
19. Here it would be blissful to take note that cube; the representative regular body of 3-space accepts 7 versions.
20. A step ahead, 4^3 numbers of cubes synthesize a structural set up of 9^3 structural components and that 4 space body as 9 versions.
21. In general N^3 cubes synthesize a structural set up of $(2N+1)^3$ structural components.



LESSON-7

DIAGONALS AS TRANSLATION PATHS FOR DIMENSIONAL FRAMES IMBEDDED IN CORNER POINTS OF CUBE

1. In each corner point of a cube is imbedded a 3 dimensional frame of half dimension.
2. The orientation of all the $8 \times 3 = 24$ (Half axes) is inward towards centre of the cube.
3. These 8 three dimensional frames (Half dimension) are coordinated in 4 pairs by the 4 internal diagonals of the cube.
4. Diagonal is a translation path for the pair of 3 dimensional frames of half dimensions imbedded in the end points of the diagonals (being the corner points of a cube).
5. The 3 dimensional frames imbedded in the end points of the diagonal translate inward towards centre of the cube along the coordinating diagonal as the translation path.
6. The pair of 3 dimensional frames, while during translation, their origins reach at centre of the cube, this pair of 3 dimensional frames of half dimensions synthesize in to a 3 dimensional frames of full dimensions.
7. This way there get synthesized quadruple number of 3 dimensional frames of full dimensions.
8. These quadruple 3 dimensional frames of full dimensions together with a 3 dimensional frames already available with its origin super imposed upon the centre of the cube, makes a set up of 5 three

- dimensional frames with their origins at centre of the cube.
9. It would be relevant to take note that at centre of the cube is the seat of 4-space.
 10. And 4 space body has 9 versions parallel to 9 geometries range of 4 space of which 5 are non-negative signatures, and at the same time 5 are of non-positive signatures.
 11. This makes 10 directional flows parallel to 10 directional translations permissible as along pair of orientations of quadruple diagonals and as along upward and downward orientation of the 3 dimensional frames with origin at the centre.
 12. This feature of 10 directional translation paths and a set up of $3 \times 5 = 15$ dimensional frames available at centre of the cube deserves to be comprehended well.
 13. The finding factor $(3/2)$ coordinating values pair $(10, 15)$ is parallel to the coordinating factor of the structural contribution by the cubes $(27, 18, 12, 8)$ diminishing as values $(9, 6, 4)$ being of the feature $4 \times 3/2 = 6, 6 \times 3/2 = 9$.
 14. It would be blissful to take note that this is a progression factor for reach from value 2 to value 3 with $3 = 2 \times 3/2$.



LESSON-8

SYNTHESIS OF 2, 3 & 4 SQUARES/ QUARTER SQUARES OF A SQUARE

1. It would be a blissful exercise to chase sequential synthesis of 2, 3 & 4 squares/quarter squares of a square.
2. It would be relevant to take note that square is a set up of 9 structural components in all of which 4 are corner points, 4 are boundary lines and 1 is surface area.
3. When one square synthesizes with another square, one of the edges gets dispensed with as there being a common edge during the synthetic set up for a pair of squares.
4. This would amount to dispensing with 3 structural components because of edge and its pair of end points getting super imposed upon another edge and its corner points.
5. This way while the contribution for this synthetic set up by the first square is going to be of 9 structural components, however, in respect of the second square this contribution is to remain only of 6 structural components.
6. The third and fourth quarter squares contribution in the synthetic set up is going to be 6 and 4 structural components respectively. It would be blissful to take note that the values triple (9, 6, and 4) accept coordinating factor (3/2).



TEXT BOOK CLASS IX

SECTION-5

SUTRAS WISE APPLICATIONS

I

Ganita Sutra 1

1. Working rule of Ganita Sutra 1 is 'one more than before'.
- 2.

2

Ganita Upsutra 1

1. Working rule of Ganita upsutra 1 is 'proportionality'.
- 2.

3

Ganita Sutra 2

1. Working rule of Ganita Sutra 2 is 'all from 9 and last from 10'.
- 2.

4

Ganita Upsutra 2

1. Working rule of Ganita upsutra 2 is 'that remain is Reminder'.
- 2.

5

Ganita Sutra 3

1. Working rule of Ganita Sutra 3 is 'vertically and crosswise'.
- 2.

6

Ganita Upsutra 3

1. Working rule of Ganita upsutra is 'placing first with the first and last with the last'.
- 2.

7

Ganita Sutra 4

1. Working rule of Ganita Sutra 4 is 'to transpose and to apply'.
- 2.

8

Ganita Upsutra 4

1. Working rule of Ganita upsutra 4 is 'having operation up till seven steps'.
- 2.

9

Ganita Sutra 5

1. Working rule of Ganita Sutra is 'zero value is of parallel equal upward choice'.
- 2.

10

Ganita Upsutra 5

1. Working rule of Ganita upsutra 5 is as ‘osculators’.
- 2.

11

Ganita Sutra 6

1. Working rule of Ganita Sutra 6 is ‘zero value reflects in symmetry’.
- 2.

12

Ganita Upsutra 6

1. Working rule of Ganita upsutra 6 is ‘to have repeated application of deficiency’.
- 2.

13

Ganita Sutra 7

1. Working rule of Ganita Sutra 7 is 'of simultaneously addition and minus'.
- 2.

14

Ganita Upsutra 7

1. Working rule of Ganita upsutra 7 is 'reaching square by deficiency'.
- 2.

15

Ganita Sutra 8

1. Working rule of Ganita Sutra 8 is 'of completeness and incompleteness'.
- 2.

16

Ganita sutra 9

1. Working rule of Ganita Sutra 9 is 'rule of flow out and flow in'.
- 2.

17

Ganita Upsutra 8

1. Working rule of Ganita upsutra 8 is 'complement of reach values 10'.
- 2.

18

Ganita Sutra 10

1. Working rule of Ganita Sutra 10 is 'of deficiencies'.
- 2.

19

Ganita Upsutra 9

1. Working rule of Ganita upsutra 9 is 'end reach value by complement'.
- 2.

20

Ganita Sutra 11

1. Working rule of Ganita Sutra 11 is 'part as a hole'.
- 2.

21

Ganita Upsutra 10

1. Working rule of Ganita upsutra 10 is 'to have features binding thread to be removed'.
- 2.

22

Ganita Sutra 12

1. Working rule of Ganita Sutra 12 is 'by duplicating the values'.
- 2.

23

Ganita Upsutra 11

1. Working rule of Ganita upsutra 11 is '°'.
- 2.

24

Ganita Sutra 13

1. Working rule of Ganita Sutra 1 is 'one more than before'.
- 2.

25

Ganita Upsutra 12

1. Working rule of Ganita Sutra 1 is 'one more than before'.
- 2.

26

Ganita Sutra 14

1. Working rule of Ganita Sutra 1 is 'one more than before'.
- 2.

27

Ganita Upsutra 13

1. Working rule of Ganita Sutra 1 is 'one more than before'.
- 2.

28

Ganita Sutra 15

1. Working rule of Ganita Sutra 1 is 'one more than before'.
- 2.

29

Ganita Sutra 16

Working rule of Ganita Sutra 1 is 'one more than before'.

SECTION-7

3-SPACE DOMAIN

1

DYNAMIC STATE SOLIDS WITHIN 3-SPACE

1. Ganita Sutra 11 '*vyasti-samashti*' conceptually is the mathematical domain of 'part as a whole'. This amounts to acceptance of complete structure of a space domain within every constitutions of space domain.
2. Broadly it amounts to manifestation of a cube within a cube.
3. The chase feature of this domain is the dynamic state solid within 3-space.
4. Like that, a step head is going to be a dynamic state four space domain within 4-space itself.
5. In general dynamic state hyper cube n within hyper cube n domain is the general feature of Ganita Sutra 11.
6. Let us a paused here and to sequentially chased dynamic state solid within 3-space.
7. Step wise, this chase would be following feature:-
Step 1:- Let cube is the representative regular body of 3-space. It has such accepts value '3'.
Step 2:- The motion of cube along its axis (of linear order), will add value '1' and their by there would be a reach a value $1+3 = 4$.
Step 3:- 3 dimensional frame is set up of 3 linear dimensions and such this dimensional frame contribute value $3 \times 1 = 3$. With this contribution, the value comes to be $1+3+1 \times 3 = 7$.
Step 4:- The motion of solid would be towards all the

- three axes and their by the total value would come to be $3 \times 7 = 21$.
8. One may have pause here and take note that value 21 permits reorganization $21 = 1+2+3+4+5+6$.
 9. A step head, as the cube is with a cube, as such it shall acquiring addition value '3', with which the grand summation value of a dynamic state solid with a cube will take us to $21+3 = 24$.
 10. One may have pause here and take note that value 24 accepts re-organization as $24 = 3 \times 8$, which is parallel to 24 quardinate of solid boundary of 8 component of hypercube 4.
 11. Still further value $24 = 6 \times 4$ will bring us face to face with the dimensional value of creative dimensional frame of self-referral domain.
 12. One may have pause here and take note that the split of 3-space into 8 octants amount to release of 4 space at the centre of the cube and there would be transcendence of 12 edged cube which will manifest and additional edge 13 edge with an four space.
 13. One may have pause here and take note that within 4-space, solid boundary of eight component will accepts quardination in terms of $8 \times 4 = 32$ quardination and same together with 13 edges setup of the cube with an four space will make value $32+13 = 45$.
 14. It would be a blissful to take note that $45 = 1 + 2 + 3 + 4 + 5 + 6 + 7 + 8 + 9$.
 15. It would be a blissful to take note that *MANSAARA* scripture of Sathapatya up-Ved enlighten that there are 13 internal devas and 32 external devas.
 16. It would be a blissful to take note $9 = 3^2$.
 17. And $8 = 2^3$.

18. One shall sit comfortably and permit the transcending mind to glimpse and imbibe above features of dynamic state existence within 3-space which result into transition and transformation by transcendence at the origin into 4-space.
19. It is this feature which bring us face to face with the format feature, values and virtues of Triloki (3 spaces simultaneously manifesting within 3-space domain.
20. This 3 fold manifestation is as of interval, square and cube as of sequential steps of single double and the all the three dimensions coming into play.
21. Here it would be a blissful exercise the internal structure setup of cube accepts a three dimensional frame of 3 spatial dimensions which split 3 space into 8 octants and these octants stands coordinated as solid boundary of spatial order of 4 space.
22. The transition from a dimensional frame of linear dimensional to a dimensional frame of spatial dimensions, bring to focus the mathematics of bridging the gaps of transition from linear order setup to spatial order setup.
23. One may have pause here and take note that linear dimensions synthesized and lead to dimensional synthesis values sequence being:
(... -21, -15, -10, -6, -3, -1, 0, 1, 3, 6, 10, 15, 21 ...).
24. Spatial dimensions synthesis value sequence comes to be:
(... -12, -10, -8, -6, -4, -2, 0, 2, 4, 6, 8, 10, 12 ...).
25. It would be a blissful to revisit above pair of synthesis value sequences of linear order dimensions and of spatial order dimensions and to glimpse and imbibe the transition gaps values and reach at the way these gaps stand bridged.



2

**TRANSITION GAPS VALUES SEQUENCES OF
LINEAR ORDER AND SPATIAL ORDER
SYNTHESIS VALUES**

1. Linear order dimensions synthesis values sequence (sequence -1) is as:
(... -21, -15, -10, -6, -3, -1, 0, 1, 3, 6, 10, 15, 21 ...).
2. Spatial order dimensions synthesis value sequence (sequence 2) is as:
(... -12, -10, -8, -6, -4, -2, 0, 2, 4, 6, 8, 10, 12 ...).
3. One may have pause here and take note that the difference of above sequence 1 (linear order dimensions synthesis values) and sequence 2 (of spatial order dimensions synthesis values) comes to be as under)

Sequence 2 – Sequence 1:

(... 9, 5, 2, [0, -1, -1, 0, 1, 1, 0,] -2, -5, -9 ...).

4. The above differences value sequence (sequence 3) is designated as zero stage differences values sequences.
5. **First stage difference values sequence (sequence four):**

Sequence four is the sequence of sequential differences of the values of sequence 3.

Sequence four:

sequence four comes to be as under:

(... -6, -5, -4, -3, -2, -1, 0, 1, 1, 0, -1, -2, -3, -4, -5, -6 ...).

Second stage value differences sequences (sequence five):

The sequence of value differences of sequential of

sequence four is designated as sequential five.

Sequence five:

Sequence five is values as under:

(... 1, 1, 1, 1, 1, 1, 0, -1, -1, -1, -1, -1, -1, ...).

Third stage value difference sequence (sequence 6):

Sequence six is the sequence of differences values of constitutive values of sequence 5.

Sequence six:

sequence six is of values as under:

(... 0, 0, 0, [0, -1, -1, 0,] 0, 0, 0 ...).

Fourth stage value difference sequence (sequence 7):

Sequence 7 is the sequence of difference of constitutive value of sequence 6.

Sequence seven:

Sequence 7 is of value as follow:

(... 0, 0, 0, [0, -1, 0, 1, 0,] 0, 0, 0 ...).

6. One may have pause here and take note that the chain of sequence of differences of constitutive values of given sequence leads to another sequence.
7. In this series /chain of sequence of difference of values, from sequence 6 onwards, the central values form a group and another side the central group of values, theirs remain is equal values.
8. It is this feature which deserved to be comprehended well.
9. One may have pause here and take note that the central group of values constitutes a range of object image setup as if the centre of the central group of values is the

placement of a mirror and first of the range is the reflection image of the second of the range.

10. One shall sit comfortably and permit the transcending mind to glimpse and imbibe format feature and value of this phenomenon.



3

LINEAR ORDER AND ITS NEGATIVE LINEAR ORDER

1. 3-space mathematics is a mathematic of linear order.
2. 3-space domain accepts linear measure.
3. Measure go parallel to sequential progression of dimensions formats.
4. Domain within dimensional frame gets framed and permits coverage for its each constitutes in terms of the measure of its dimensions.
5. In the context of 3-space, the 3-space domain as fixation for its constitution in term of its dimensional measures available for all the dimensions.
6. Dimensional frame of 3-space being a setup of 3 dimensions as such there would be an availability of a linear measure for sequential progression chase along each dimensions. This availability of a measure with a working rule Ganita Sutra 1: 'one more than before, will help us exhausted coverage for the entries domain of a linear dimension.

7. One may have pause here and take note that proportionality summity rule of Ganita Upsutra 1 will help have a chase of dimensional frame of other order as well.
8. One may have further have a paused here and take note that dimensional order itself is a one space domain in the role of dimensions of 3-space domain, as such one space as well having simultaneously play for its own dimensional order, which is a negative linear dimensional order, as and the same dimensions of dimensions of 3-space.
9. One may have further have a paused here and take note that the synthesis of linear dimensions is their because of the availability of dimensions of dimensions.
10. This sustainess of dimension of dimensions that way takes values is equal to value of dimensions to dimensions from the individual values a pair of dimensions getting synthesized.
11. One may have pause here and take note that linear dimension is of value '1'.
12. Pair of linear dimensions yield value ' $1+1 = 2$ '.
13. Out of this value, the value of dimension of dimensions is to be accounted for.
14. The value of dimension is dimension '-1'.
15. As such after accounting for '-1' out of value of pair of dimensional '2' there would emerged synthesized value after accounting for a value of dimensional of dimensional as ' $[(2)-(-1)] = 3$ '.
16. One shall sit comfortably and permit the transcending mind to glimpse and imbibe this synthesis values mathematics.
17. One shall fully comprehend and to completely appreciate the synthesis values mathematics of a pair of dimensions

to acquire proper insight and to attain appropriate enlightenment.

18. A step head, a synthesis of triple dimensions will required that third dimension on its synthesis is to account for value equal to dimension of dimensions firstly for the synthesis of third dimensions, with the first dimension and secondly for the synthesis of third dimensions with the second dimensions.
19. One may have further have a paused here and take note that in respect of third dimension there would be accommodated of value twice of the value of dimensions of dimensions. As such the dimensional synthesis mathematics, at the stage would be following working steps:-
 - Step 1** value of synthesis pair of linear dimensions = 3.
 - Step 2** value of third dimensions = 1.
 - Step 3** value of a pair of dimension of dimensions = -2.
 - Step 4** dimensional synthesis values for triple dimensions
 $= 3+1-(-2) = 6$.
20. One may have pause here and take note that, it is this feature of linear dimensions synthesis values sequence (1, 3, and 6) for single, double and triple dimensions which deserve to be comprehended well.
21. One may have pause here and take note that it brings us face to face with organization of (1, 3, and 6) as (1, 1+2, 1+2+3).
22. It is sequential summation for values triple (1, 2, 3) which deserves to be comprehended well.
23. One may have a paused here and take note that values triple (1, 2, and 3) is unique as that none of these accepts perfect as other than 1.

24. Further as that, the value triple (1, 2, 3) accepts organization as (1, 1+1, 1+1+1).
25. It further goes parallel to availability of single dimensional a pair of dimensional and all the triple dimensional of a three dimensional frame.
26. It would be blissful to sequential chase:
- i. (0, 0, 0).
 - ii. (1, 1, 1)
 - iii. (1, 1+1, 1+1+1)
 - iv. (1, 2, 3)
 - v. (1, 1+2, 1+2+3)
 - vi. (1, 3, 6)
 - vii. (2-1, 2+1, 2-1+2-0+2+1)
 - viii. (2, 2, 2)
 - ix. (2, 4, 6)
 - x. (2, 6, 10)
 - xi. (1+1, 3+3, 5+5)
27. One shall sit comfortably and permit the transcending mind to glimpse and imbibe above format feature values and to acquire insight and enlightenment about the sequential linear order progression steps measure with the help of Ganita Sutra 1 and Ganita Upsutra 1. ■

SECTION 7

TRI-LOKI

1. Tri-loki literally means *Tri* (three) *Loki* (spaces).
2. Conceptually, Tri-loki is the Existence Phenomenon of 3-spaces set up within 3-space itself.
3. 3-spaces set up within 3-space, in its manifested form is the existence of interval, square and cube within a cube.
4. It may be accepted as a definition as that interval is the manifested body of 1-space, square is the manifested body of 2-space and cube is the manifested body of 3-space.
5. It shall be bringing us face to face with parallel format of 1-space, interval and of one axis of 3 dimensional frame.
6. Further as that, 2-space, square and a pair of axes of 3 dimensional frames are of parallel format features.
7. Still further, 3-space, cube and the set up of all the three dimensions of 3 dimensional frame beings of same format features.
8. One shall sit comfortably and to visit and to revisit set ups of interval within cube and of interval outside the cube.
9. Likewise, one shall visit and revisit the set ups of a square within cube and outside a cube.
10. Interval within a cube shall be a set up of points of 3-space contents.
11. Likewise, the square within a cube as well is going to be a set up of points of 3-space contents.
12. One may have a pause here and to comprehend the distinguish feature of an interval as a set up of points of

- 1-space content from that of the set up of points of 3-space contents.
13. Likewise, one shall comprehend the distinguish feature of the set up of square being of points of 2-space content form that of the set up of points 3-space contents.
 14. It would further be blissful to comprehend the distinguishing feature of outer and inner cube.
 15. The outer cube is having enveloping boundary which is a synthetic set up of 8 corner points, 12 edges and 6 surfaces.
 16. While on the other hand inner cube is a 3 space content lump within a bigger 3-space content.
 17. One shall sit comfortably and permit the transcending mind to fully glimpse and to completely imbibe the above distinguishing features of the set up of interval, square and cube within a cube from those of interval square and cube outside the cube.
 - 18.

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**VEDIC MATHEMATICS
TEXTBOOK CLASS IX**

SECTION-1

1

TECHNICAL TERMS

(I)

3-SPACE MATHEMATICS

TECHNICAL TERMS

18. 3-space.

3-space is a space within a 3 dimension frame of 3 dimensional layer and cube and sphere being its representative regular bodies.

19. 3 dimensional frames.

3 dimensional frame is set of 3 dimensional layers and an origin.

20. Linear dimension.

- 1-space plays the role of dimension.
21. 3-space content.
3-space content within a 3 dimensional frame is designated as 3 space contents.
 22. 3-space body.
3-space contain manifest a 3 space body.
 23. Representative regular body of 3-space.
A 3-space body which does not refer any dimension on any other any dimension is designated representative of a regular body. Cube is the representative of 3-space body any dimension on any other dimensional. Likewise sphere is also a representative a regular of 3-space as sphere also is not preferring any dimension any other dimension.
 24. Hypercube 3.
Hypercube 3 is a 3-space body with 1 space playing the role of dimension, 2-space playing the role of boundary, 3-space playing the role of domain, 4-space playing the role of origin. Cube is hypercube 3.
 25. Linear dimension.
Linear dimension means 1-space playing of dimension.
 26. Spatial boundary.
Spatial boundary means 2-space playing a role of boundary.
 27. Solid domain.
Solid domain means 3-space playing role of domain.
 28. Creative origin.
Creative origin means 4-space the playing the role of origin.
 29. Transcendental base.
Transcendental base means 5-space playing the role of base of origin fold of hypercube.

30. Self referral format.

Self referral format means 6-space playing the role of format for base of transcendental base.

31. Unity space.

Unity space means 7-space playing the role of unity state of self referral format.

32. Natural resource.

Natural resource means 8-space as source of unity state.

33. Burhman reservoir.

Burhman reservoir means 9-space as reservoir of natural sources values.

34. 3 dimensional frame:-

11) 3 dimensionals frame is setup 3 linear dimension and one origin.

12) 3 dimensional permits split into a pair of 3 dimensional frames of half dimensions of opposite orientations.

13) Within each corner point of a cube is imbedded a 3 dimensional frame of half dimensions. One 3 dimensional frame of full dimension is of a placements with origin at the seat of center of cube.

14) Each corner point of cube is a seat of origin of a 3 dimension frame of half dimension imbedded here with origin of placement at the corner point.

15) The second dimensional frame of half dimension is in unmanifests form. It may be said that the second 3 dimensional framed of half dimensional owns its existence but is not barking its presence here.

16) This unmanifest 3 dimensional frame of half dimension, as such is designated as a black 3 dimensional frame of half dimensions, while the first

3 dimension frame of half dimension is designated as white dimensional frame.

- 17) While 3 dimensional frame has in word orientations for its axes, while white 3 dimensional has its orientation outwards.
- 18) Black 3 dimensional frame is in the outward space, a four space outside the 3-space body (cube).
- 19) White 3 dimension frame is within 3-space itself, at the boundary of 4-space.
- 20) 8 white 3 dimensional frame with origin at corner point of cube and ninth 3 dimensional frame with in cube itself with the origin of centre of cube sustain 3-space body in an integrated state.

(II)

SPACE AND SPACE CONTENTS

21. Space is the 5th element.
22. First four elements are earth, water, fire, air.
23. These five elements 'earth, water, fire, air and space' are the designated as punch maha-bhut accepts transcendental code value 40.
24. The number value 40 is parallel to 40 coordinate fixations of creative boundary of transcendental domain (4-space) of ten components as boundary of transcendental domain.
25. Formulation 'akash' accepts transcendental code value '8'.
26. One may have a pause here and to take note that $40 = (5 \times 8)$.

27. It would also be relevant to take note that formulation 'ek' accepts transcendental code value '8'.
28. 5-space accepts a dimensional frame of 5 solid dimensions (3-space in the role of dimensions of 5-space).
29. Formulation 'tray' as well accepts transcendental code value '8'.
30. Formulation 'Punch' accepts transcendental code value '15'.
31. One may have a pause here and to take note that the dimensional value of 5 solid dimensions (3-space as dimensions) leads to $(3 \times 5) = 15$ values.
32. It would further be relevant to take note that 1-space play the role of dimension of 3-space, 2-space play the role of dimensions of 4-space, 3-space play the role of dimension of 5-space, 4-space play the role of dimensions of 6-space.
33. One may have a pause here and to take note that linear order four folds manifestation layer (1, 2, 3, 4) of hypercube 3 is of a summation value $(1+2+3+4) = 10$.
34. Further as that solid order manifestation layer $(3+4+5+6)$ of hypercube 5 leads to summation value $(3+4+5+6) = 18$
35. It is this relationship of hypercube 3 with hypercube 5 which deserves to be comprehended well to appreciate dimensionalization of space.
36. One of the basic features of this dimensionalization is that space as space content sequentially unfolds itself as a range of hyper cubes of simultaneously manifestation of 4 consecutive dimensional spaces contents illustratively 1-space (as 1-space contents), 2-space (as 2-space contents), 3-space (as 3-space contents), and 4-space (as 4-space contents) simultaneously manifests as hypercube

- 3 with 1-space contents playing the role of linear dimension, 2-space contents playing the role of a spatial boundary, 3-space contents playing the role of a solid domain and 4-space contents playing the role of origin fold of hypercube 3.
37. In general hypercube N is a set up of a four folds manifestation layer $(n-2)$ space being dimension fold, $(n-1)$ space being boundary fold, (n) space being domain fold, $(n+1)$ space being its origin fold.
38. One shall sit comfortably and permit the transcending mind to glimpse space as a space content unfolding itself at creative boundary of transcendental domain as a manifested range of hypercube of 4 folds dimensional space contents.
39. One may further have a pause here and to take note that one of the basic feature of dimensional space (content) is that it distinctively place, at a time the role of a distinct fold of manifested creations as of hypercube formats.
40. It is this feature of space content deserves to be comprehended well.

(III)

BASIC POSER AND ELOBRATION

6. Define 3-space.
Space approached by a dimensional frame 3 linear dimension is designated '3-space'.
7. Elobrate 3 dimensional frame

- 1-space in the role of dimension makes a linear order. 3 linear dimensions synthesis a 3 dimensional frames. Synthesis of dimension is there because of availability of spatial order for the common origin for all the 3 dimensions.
8. What are the features of origin of a 3 dimensional frame
2-space plays the role of supplier of structures for the origin placed within creator space (4-space).It is a spatial order phenomenon of 4-space within reach is seated origin of 3 dimensional frame.
 9. An elaborate role of 1-space as dimensions of 3-space
Here 1-space means 1-space content the referred role of 1-space, in fact, is the role of 1-space content.
 10. Elaborate 1-space content
Space as space content permits approached to it in terms of dimensional frames. When space is approach by single dimension, by space comes within comprehension as one space and the domain fold content of 1-space body becomes the expression of 1-space contents

(IV)

3-SPACE MATHEMATICS

BASIC POSER AND ELOBRATION

6. What is the domain of 3 space mathematics?

It is all about the mathematical reachable values are 3-space.

7. **What is the values range of 3-space?**

It is parallel to space reachable by a linear order.

8. **What are the features of a linear order?**

1-space content in the role of dimension makes a linear order. 3 linear dimensions synthesis a 3 dimensional frame.

9. **How linear dimensions synthesis as a dimensional frame?**

The availability of common origin of spatial structure results into synthesis of a 3 dimensional frames as a setup of 3 dimensions and a common origin of spatial order.

10. **What is the virtue of one space content?**

Space content when is approached by a single dimension it permits its comprehension and reach as 1-space contents.

3-SPACE MATHEMATICS VALUES COMPILATION

(I)

PRELIMENARLY

6. 3-space is a linear order space it manifest a hypercube 3 format.

7. Hypercube 3 format is four folds format of 1-space as dimensional fold, 2-space as boundary fold, 3-space as domain fold and 4-space as origin fold.
8. 3-space domain as a framed domain with a sealed origin, in its dynamic state swaps outside space on a special (boundary) format.
9. Within framed 3-space domain of a sealed origin, the chase of 3-space body in static as well as in dynamic state bring to focus the features of 3-space contents lamb and as discrete entities, as well as a continenom phenomenon.
10. 2 fold frames of 3-space domain firstly as a dimensional frame and secondly as a spatial enveloping frame, have there distinct roles in the existence phenomenon of 3-space.

(II)

3-SPACE MATHEMATICS WORKS OUT THE EXISTENCE PHENOMENON OF 3-SPACE

2. 3-space mathematics is basis base mathematics of 3-space VMS & T.

(III)

BASIS BASE SUTRAS

10. Athrav Ved Ganita Sutras and upsutras are the basis base sutras of mathematics of the discipline of Vedic Mathematics, Science & Technology.
11. Vedic Mathematics, Science & Technology as a reached at dimensional space wise distinct values.
12. Ganita Sutras and upsutras help reach at dimensional space wise distinct values of Mathematics, Science & Technology.
13. As such Ganita Sutra and upsutras are the basis base sutras of 3-space mathematics as well.
14. The basic approach mathematical domain in sequential phases. Arithmetic is approach in algebraic format, algebra is approach in geometric format, geometry of manifestations format, manifestations are approached upon transcendence format which sequentially go self-referral, and of unity state with natural source reservoir been fountained from Brahman virtues.
15. Measures as well go transcendental generation way as counts, units, strings, layers, ranges, folds and of cyclic orders.
16. 3-space mathematics domain focus upon counts and units taking counts as measures for pre dimension roles and units being of dimensional domains.
17. A step head, transcendence through origin fold as its reach up till the base fold, as the fifth fold. It infects amounts to transition and transformation for the linear order into spatial order. And like that, sequentially the transcendence through compactified origins take ahead and ahead.
18. The general outline of Teaching and Learning of Vedic Mathematics may of following features.



SECTION-2
CONTENTS

1. Ganita Sutras 1&2 and
2 to 3
Ganita Upsutras 1&2
(III) Ganita Sutra 1 and Ganita Upsutra 1
2 to 3

TEXT BOOK CLASS IX

SECTION-2

1

GANITA SUTRAS 1 & 2 AND

GANITA UPSUTRAS 1 & 2

(I)

GANITA SUTRA 1 AND GANITA UPSUTRA 1

19. With the help of Ganita Sutra 1 and Ganita Upsutra 1, one shall reach at sequential arrangements for values.
20. First of all, one may pose to oneself the similarity and dissimilarity of feature and value in respect of the formulation of following setup:
(One, first, single, sole, lone, along, lonely, oneness ...).
21. Further, one shall glimpse and imbibe the similarity and dissimilarity of following values setups:
(1, 1^0 , 1^1 , 1^{-1} , $1/1$, $2/2$, $3/3$, $(N \times M) / (N \times M)$, $(N \times 1) / 1 \times N$ ).
22. To number the milestones, to number the roads, to roles out roll numbers ...
23. To sequential, polygons, to sequence cuecue.

24. To sequence variables and degrees of equations.
25. To sequence grids.
26. To sequence place value system.
27. To sequence geometric bodies, dimensional spaces, dimensional frames.
28. To construct a scale, to number thermometer, to construct measuring rods, to have numbers line, to have timeline, to sequence life span.
29. To distinguish unit length, unit area, unit volume.
30. To organized dictionary to prepare library catalogue of books.
31. To sequence numbers tables.
32. To sequence numerals.
33. To sequences finite strings.
34. To sequences infinite sequence of infinite sequences.
35. To sequentially unfold osculate.
36. To parallel sequence linear order and negative linear order.

SECTION-4

VEDIC MATHEMATICS OF 3-SPACE

LESSONS

INDEX

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| 9. Cube | |
| 2 to 4 | |
| 10. Interval, Square and cube. | |
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| 11. Points of interval, square and cube | 5 to 6 |
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| 14. Synthesis of 2, 4 & 8 cubes/
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| 8 sub cubes as a cube. | |
| 15. Diagonals as translation paths for
17 | 15 to |
| dimensional frames imbedded in
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| 16. Synthesis of 2, 3 & 4 squares/
18 | 17 to |
| quarter squares of a square | |

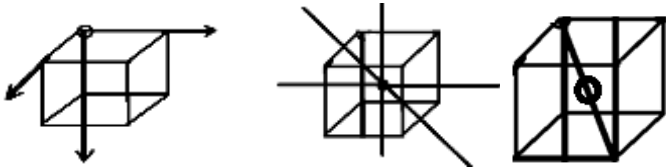
VEDIC MATHEMATICS OF 3-SPACE

LESSON – 01

CUBE



1. Cube is a representative regular body of 3-space.
2. It is a regular body as here no axis is preferred over any other axis.
23. Cube has a geometric envelop stitched by 8 corner points, 12 edges and 6 surfaces making it a set up of $8 + 12 + 6 = 26$ structured components.
24. Volume of the cube as one another structural components makes the total structural components being $26 + 1 = 27$.
25. Number value 27 accepts re-organization as $27 = 3 \times 3 \times 3 = 3^3$.
26. Corner points are of 'zero volume, zero area and zero length'.
27. Edges are of 'zero volume and zero area'.
28. Surface plates are of 'zero volume'.
29. Volume avails all the three axes.
30. Surface avails a pair of axes.
31. Edge avails a single axis.
32. Corner points are devoid of all the axes.
33. Each corner points are a meeting point three edges.
34. Each surface is enveloped by four edges.
35. Volume is enveloped by geometric envelope stitched by 8 corner points, 12 edges and 6 surfaces.
36. Cube accepts 4 internal diagonals.
37. These internal diagonals meet at a point designated as center of the cube.



38. In each corner point meet three edges, which also play as axis.
39. At center of the cube can be embedded a dimensional frame of three axes.
40. These three axes and center of the cube as origin of three dimensional frames make a set of 4 structural components.
41. These four structural components (three axes and fourth origin / center) together with other 27 structural components of the set up of the cube (8 corner points, 12 edges, 6 surfaces and 1 volume) together make out a set up of 31 structural components.
42. These 31 structural components together with 4 internal diagonals make out an extended set up of $31 + 4 = 35$ structural components. ■

LESSON 2

INTERVAL, SQUARE AND CUBE:

25. 3 dimensional frame structures space.
26. So structured space in terms of 3 dimensional frame of 3 axes lines is designated as a 3 space set up.
27. Cube is the structured body of this 3 space.
28. 3 axes sequentially structure interval, square and cube.
29. This sequential structuring by 3 axes is a sequential structuring of 3-space.

30. These 3 space structures become the structures within cube itself.
31. It leads to sequential reach of structured cube within a cube.
32. Single axis formats interval.
33. Pair of axis format square.
34. Cube is formatted by all the 3 axes.
35. Interval has length (A^1) and a pair of end point $(2A^0)$.
36. These together make a set up $(A^1 + 2A^0)^1$.
37. Square has area (A^2) , 4 boundary lines $(4A^1)$ and 4 corner points $(4A^0)$.
38. These structural components of square make a set up $(A^2 + 4A^1 + 4A^0) = (A^1 + 2A^0)^2$.
39. Structural component of cube are volume (A^3) , 6 surface plates $(6A^2)$, 12 edges $(12A^1)$ and 8 corner points $(8A^0)$.
40. This structural set up leads to $(A^3) + (6A^2) + (12A^1) + (8A^0) = (A^1 + 2A^0)^3$.
41. These structural components set ups of interval, square and cube accept common value formula $(A^1 + 2A^0)^n$, $N = 1 + 2 + 3$.
42. It would be interesting to note that cube structured within a cube will itself further accept another cube to be structured within it.
43. And this sequence may continue infinitely.
44. Likewise the square within a cube as well permit structuring of a square inside it.
45. And a step ahead there would be a reach for a structured square within the structured square within square within cube.
46. And this sequence as well may continue infinitely.
47. Likewise would be a situation in respect of intervals within a cube as well.

48. This will lead us to infinite sequence of intervals, squares and cubes within cube.



LESSON-3

POINTS OF INTERVAL SQUARE AND CUBE

15. Point of interval has length, howsoever small it may be.
16. Point of a square has area howsoever small it may be.
17. Point of a cube has volume howsoever small it may be.
18. Line within a cube is a set up of points of a cube.
19. Square within a cube is a set up of the point of the cube.
20. This will help us distinguish points of interval within cube and of an interval outside the cube.
21. Likewise, it will also help us distinguish point of a square within a cube from that of a square outside the cube.
22. Likewise the point of interval within square is distinguishable from the point of interval outside the square.
23. Further interval provides a format for setting of the points devoid of length.
24. Likewise square provides a format for setting of points devoid of area, as well as devoid of length.
25. Cube provides a format for setting of points devoid of volume, as well as devoid of area and also devoid of length.
26. It would be a blissful exercise to distinguish interval as a format for setting of points devoid of length from the

interval as the set up of points imbedded with length, howsoever small the same may be.

27. A step ahead, it would be a blissful exercise to distinguish square as a format for setting of points of interval devoid of area from that of a square as a set up of points imbedded with area howsoever small it may be.
28. And further it would also be a very blissful exercise to distinguish cube as a format for setting of surface plates devoid of volume from that of cube as a set up of point imbedded with volume howsoever small the same may be.



LESSON -4

CONCEPT OF STRUCTURED POINT

10. The concept of a structured point is the basic concept.
11. Point of a line is imbedded with the structures of a line.
12. The point of square is imbedded with the structures of an area.
13. Point of cube is imbedded with the structures of volume.
14. Point devoid of structures of volume is not the point of cube
15. Point devoid of structures of area is not a point of square.
16. Point devoid of structures of length is not a point of an interval.
17. A point devoid of structures of volume, area and length may be designated as a void point or a point simpliciter, outside the 3 dimensional frames.
18. Point within a 3 dimensional frame may get fulfilled with structures because of a single axis and by a pair of axes

and even due to the presence of all the 3 axes.



LESSON-5

DUAL STATUS OF CENTRE OF A CUBE

20. Centre of the cube is uniquely placed being at an equal distance from all the corner points of the cube.
21. This unique placement of centre distinguishes it from all other points of the cube.
22. This uniqueness makes centre to be of a dual status, firstly like all other points of the cube and secondly because of its uniqueness from all other points of the cube.
23. Centre of the cube is the collapse point of all the corner points of the cube.
24. In fact centre is the collapse point of the cube itself.
25. Cube is the seat of inner most corner points of all 8 sub cubes of the cube.
26. This way centre of the cube gets enveloped by super imposition of the inner most corner point of the sub cubes.
27. This makes 9 point fixation for the centre of the cube.
28. Placement space of the centre of the cube with its enveloping by 8 inner most corner points of sub cubes makes centre of the cube as a placement seat devoid of the structures of the cube points.
29. This status of the centre of the cube as placement seat of space beneath the centre as point of the cube brings to focus the nature of dual status of the centre of the cube.
30. This makes status of centre of the cube being parallel to the status of origin of dimensional frame of 3-space

- and also further being parallel to that of the origin of 3-space itself as well.
31. It brings to focus the feature of seat of centre of cube being enveloped within a solid boundary of 8 components (sub cubes of the cubes) itself.
 32. Cube itself is enveloped by 6 surface plates.
 33. Each surface plates of cube is enveloped by 4 intervals (edges) as boundary line of a square.
 34. Each edge is bounded by a pair of end points (corner points).
 35. It makes a blissful sequence that edges are bounded by a pair of corner points, surface plates are bounded by 4 edges, volume of the cube is enveloped by 6 surface plates and centre of the cube is enveloped by 8 sub cubes.
 36. It would be blissful to comprehend and imbibe this feature of pair of end points, 2 pairs of boundary lines, 3 pairs of surfaces and 4 pairs of solids (sub cubes). All marking their presence simultaneously in the structural set up of the cube as the representative regular body of 3-space within a 3 dimensional frame of 3 axes.
 37. It would be blissful to take note that these sequential values of 2 points, 4 lines, 6 surfaces and 8 solids at the boundary in fact are sequentially taking us to interval as 1 space body of single axis format, surface as a 2 space body of a pair of axes format, cube as a 3 space body of 3 axes format and ahead there being a 4 space body accepting solids at its boundary, while solid itself is accepting surfaces at its boundary and surfaces are accepting lines at their boundary and lines themselves are accepting points at their boundary.
 38. It is blissful that, that way, we have reached a step ahead of solids, a step which takes us in a space ahead of 3-

space.



LESSON-6

SYNTHESIS OF 2, 4 & 8 CUBES/

8 SUB CUBES AS A CUBE

22. A cube is a structural set up of 8 corner points, 12 edges, 6 surfaces and 1 volume, together making it a set up of 27 structural components.
23. When 2 cubes of 27 structural components each are synthesized together with one of the surface plate being the common separating surface for both the cubes, it shall be dispensing with the structural components of one of the surface plate.
24. One surface plate is (a square) is a set up of 9 structural components namely 4 corner points, 4 edges and 1 surface area.
25. Therefore, a pair of cubes of 27 structural components each, together making a set of $27+27= 54$ structural components, on their synthesis will get reduced to a synthetic set up of a pair of cubes being of $27+27-9= 45$ structural components only.
26. It may be taken as that the first cube contributes its all the 27 structural components while the second cube to contribute only $27-9= 18$ components only.
27. This synthetic set up of a pair of cubes, as of 45 structural components will be of following classification for these structural components:

Cube	Corner points	Edges	Surfaces	Volume	Total
First	8	12	6	1	27
Second	4	8	5	1	18
Total:	12	20	11	2	45

28. Now when third cube is synthesized with the above set up of a pair of cubes, there would be a further contribution of 18 structural components by the third cube.
29. One may note that while third cube will be synthesizing itself with the above synthetic set up of a pair of cubes, the structural component of one of the surface plate will get dispensed with.
30. The resultant structural component of synthetic set up of 3 cubes would be as of $27+18+18= 63$ structural components accepting classification as under:

Cube	Corner points	Edges	Surfaces	Volume	Total
First	8	12	6	1	27
Second	4	8	5	1	18

Third	4	8	5	1	18
Total:	16	28	16	3	63

31. Now when one more cube, namely fourth cube would be synthesized with the above synthetic set up of 3 cubes, the contribution because of the fourth cube would be only of 12 structural components, as in this situation 2 of the surface plates will get dispensed with.
32. As a result, the synthetic set up of 4 cubes will make a set up of 75 structural components accepting following classification:

Cube	Corner points	Edges	Surfaces	Volume	Total
First	8	12	6	1	27
Second	4	8	5	1	18
Third	4	8	5	1	18
Fourth	2	5	4	1	12
Total:	18	33	20	4	75

33. A step ahead, when fifth cube would be synthesized with the above synthetic set up of 4 cubes, it shall be contributing only 18 structural components and thereby making synthetic set up of 5 cubes being of $75+18 = 93$ structural components accepting following classification:

Cube	Corner points	Edges	Surfaces	Volume	Total
First	8	12	6	1	27
Second	4	8	5	1	18
Third	4	8	5	1	18
Fourth	2	5	4	1	12
Fifth	4	8	5	1	18
Total:	22	41	25	5	93

34. A step ahead, synthetic set up of 6 cubes is going to be a structural set up of 105 structural components of following classification:

Cube	Corner points	Edges	Surfaces	Volume	Total
------	---------------	-------	----------	--------	-------

First	8	12	6	1	27
Second	4	8	5	1	18
Third	4	8	5	1	18
Fourth	2	5	4	1	12
Fifth	4	8	5	1	18
Sixth	2	5	4	1	12
Total:	24	46	29	6	105

35. . A step ahead, synthetic set up of 7 cubes is going to be a structural set up of 117 structural components of following classification:

Cube	Corne r points	Edge s	Surface s	Volum e	Tota l
First	8	12	6	1	27
Second	4	8	5	1	18
Third	4	8	5	1	18
Fourth	2	5	4	1	12
Fifth	4	8	5	1	18

Sixth	2	5	4	1	12
Seventh	2	5	4	1	12
Total:	26	51	33	7	117

36. Finally the synthetic set up of 8 cubes/sub cubes, as a cube shall be becoming a structural set up of 125 structural components accepting following classification:

Cube	Corner points	Edges	Surfaces	Volume	Total
First	8	12	6	1	27
Second	4	8	5	1	18
Third	4	8	5	1	18
Fourth	2	5	4	1	12
Fifth	4	8	5	1	18
Sixth	2	5	4	1	12
Seventh	2	5	4	1	12
Eighth	1	3	3	1	8
Total:	27	54	36	8	125

37. It would be blissful to take note that $8 = 2^3$ number of cubes synthesize a structural set up of $125 = 5^3$ number of structural components.
38. One may have a pause here that square as 2 space body as linear boundary of 4 components and this makes 5 versions of square parallel to presence of boundary components of 4, 3, 2, 1, 0 in number and it will help us acquire insight as to the feature of 2^3 number of cubes synthesizing a structural set up of 5^3 structural components.
39. It would be a blissful exercise to chase further as that $3^3 = 27$ cubes shall be synthesizing a structural set up of $7^3 = 343$ structural components.
40. Here it would be blissful to take note that cube; the representative regular body of 3-space accepts 7 versions.
41. A step ahead, 4^3 numbers of cubes synthesize a structural set up of 9^3 structural components and that 4 space body as 9 versions.
42. In general N^3 cubes synthesize a structural set up of $(2N+1)^3$ structural components.



LESSON-7

DIAGONALS AS TRANSLATION PATHS FOR DIMENSIONAL FRAMES IMBEDDED IN CORNER POINTS OF CUBE

15. In each corner point of a cube is imbedded a 3 dimensional frame of half dimension.
16. The orientation of all the $8 \times 3 = 24$ (Half axes) is inward towards centre of the cube.
17. These 8 three dimensional frames (Half dimension) are coordinated in 4 pairs by the 4 internal diagonals of the cube.
18. Diagonal is a translation path for the pair of 3 dimensional frames of half dimensions imbedded in the end points of the diagonals (being the corner points of a cube).
19. The 3 dimensional frames imbedded in the end points of the diagonal translate inward towards centre of the cube along the coordinating diagonal as the translation path.
20. The pair of 3 dimensional frames, while during translation, their origins reach at centre of the cube, this pair of 3 dimensional frames of half dimensions synthesize in to a 3 dimensional frames of full dimensions.
21. This way there get synthesized quadruple number of 3 dimensional frames of full dimensions.
22. These quadruple 3 dimensional frames of full dimensions together with a 3 dimensional frames already available with its origin super imposed upon the centre of the cube, makes a set up of 5 three

- dimensional frames with their origins at centre of the cube.
23. It would be relevant to take note that at centre of the cube is the seat of 4-space.
 24. And 4 space body has 9 versions parallel to 9 geometries range of 4 space of which 5 are non-negative signatures, and at the same time 5 are of non-positive signatures.
 25. This makes 10 directional flows parallel to 10 directional translations permissible as along pair of orientations of quadruple diagonals and as along upward and downward orientation of the 3 dimensional frames with origin at the centre.
 26. This feature of 10 directional translation paths and a set up of $3 \times 5 = 15$ dimensional frames available at centre of the cube deserves to be comprehended well.
 27. The finding factor ($3/2$) coordinating values pair (10, 15) is parallel to the coordinating factor of the structural contribution by the cubes (27, 18, 12, 8) diminishing as values (9, 6, 4) being of the feature $4 \times 3/2 = 6$, $6 \times 3/2 = 9$.
 28. It would be blissful to take note that this is a progression factor for reach from value 2 to value 3 with $3 = 2 \times 3/2$.



LESSON-8

SYNTHESIS OF 2, 3 & 4 SQUARES/ QUARTER SQUARES OF A SQUARE

7. It would be a blissful exercise to chase sequential synthesis of 2, 3 & 4 squares/quarter squares of a square.
8. It would be relevant to take note that square is a set up of 9 structural components in all of which 4 are corner points, 4 are boundary lines and 1 is surface area.
9. When one square synthesizes with another square, one of the edges gets dispensed with as there being a common edge during the synthetic set up for a pair of squares.
10. This would amount to dispensing with 3 structural components because of edge and its pair of end points getting super imposed upon another edge and its corner points.
11. This way while the contribution for this synthetic set up by the first square is going to be of 9 structural components, however, in respect of the second square this contribution is to remain only of 6 structural components.
12. The third and fourth quarter squares contribution in the synthetic set up is going to be 6 and 4 structural components respectively. It would be blissful to take note that the values triple (9, 6, and 4) accept coordinating factor (3/2).



VEDIC MATHEMATICS

TEXT BOOK CLASS IX

SECTION-5

SUTRAS WISE APPLICATIONS

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VEDIC MATHEMATICS

TEXT BOOK CLASS IX

SECTION-5

SUTRAS WISE APPLICATIONS

I

Ganita Sutra 1

3. Working rule of Ganita Sutra 1 is ‘one more than before’.
- 4.

2

Ganita Upsutra 1

3. Working rule of Ganita upsutra 1 is ‘proportionality’.
- 4.

3

Ganita Sutra 2

3. Working rule of Ganita Sutra 2 is 'all from 9 and last from 10'.
- 4.

4

Ganita Upsutra 2

3. Working rule of Ganita upsutra 2 is 'that remain is Reminder'.
- 4.

5

Ganita Sutra 3

3. Working rule of Ganita Sutra 3 is 'vertically and crosswise'.
- 4.

6

Ganita Upsutra 3

3. Working rule of Ganita upsutra is ‘placing first with the first and last with the last’.
- 4.

7

Ganita Sutra 4

3. Working rule of Ganita Sutra 4 is ‘to transpose and to apply’.
- 4.

8

Ganita Upsutra 4

3. Working rule of Ganita upsutra 4 is ‘having operation up till seven steps’.
- 4.

9

Ganita Sutra 5

3. Working rule of Ganita Sutra is ‘zero value is of parallel equal upward choice’.

4.

10

Ganita Upsutra 5

3. Working rule of Ganita upsutra 5 is as ‘osculators’.

4.

11

Ganita Sutra 6

3. Working rule of Ganita Sutra 6 is ‘zero value reflects in symmetry’.

4.

12

Ganita Upsutra 6

3. Working rule of Ganita upsutra 6 is ‘to have repeated application of deficiency’.

4.

13

Ganita Sutra 7

3. Working rule of Ganita Sutra 7 is 'of simultaneously addition and minus'.
- 4.

14

Ganita Upsutra 7

3. Working rule of Ganita upsutra 7 is 'reaching square by deficiency'.
- 4.

15

Ganita Sutra 8

3. Working rule of Ganita Sutra 8 is 'of completeness and incompleteness'.
- 4.

16

Ganita sutra 9

3. Working rule of Ganita Sutra 9 is 'rule of flow out and flow in'.
- 4.

17

Ganita Upsutra 8

3. Working rule of Ganita upsutra 8 is 'complement of reach values 10'.
- 4.

18

Ganita Sutra 10

3. Working rule of Ganita Sutra 10 is 'of deficiencies'.
- 4.

19

Ganita Upsutra 9

3. Working rule of Ganita upsutra 9 is 'end reach value by complement'.
- 4.

20

Ganita Sutra 11

3. Working rule of Ganita Sutra 11 is 'part as a hole'.
- 4.

21

Ganita Upsutra 10

3. Working rule of Ganita upsutra 10 is 'to have features binding thread to be removed'.
- 4.

22

Ganita Sutra 12

3. Working rule of Ganita Sutra 12 is 'by duplicating the values'.
- 4.

23

Ganita Upsutra 11

3. Working rule of Ganita upsutra 11 is ‘.
- 4.

24

Ganita Sutra 13

3. Working rule of Ganita Sutra 1 is ‘one more than before’.
- 4.

25

Ganita Upsutra 12

3. Working rule of Ganita Sutra 1 is ‘one more than before’.
- 4.

26

Ganita Sutra 14

3. Working rule of Ganita Sutra 1 is 'one more than before'.
- 4.

27

Ganita Upsutra 13

3. Working rule of Ganita Sutra 1 is 'one more than before'.
- 4.

28

Ganita Sutra 15

3. Working rule of Ganita Sutra 1 is 'one more than before'.
- 4.

29

Ganita Sutra 16

1. Working rule of Ganita Sutra 1 is 'one more than before'.

SECTION-7

3-SPACE DOMAIN

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| 5. Transition Gaps Values Sequences
Of Linear Order And
Spatial Order Synthesis Values | 5 to 7 |
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Linear Order | 7 to 10 |

SECTION-7
3-SPACE DOMAIN

DYNAMIC STATE SOLIDS WITHIN 3-SPACE

26. Ganita Sutra 11 '*vyasti-samashti*' conceptually is the mathematical domain of 'part as a whole'. This amounts to acceptance of complete structure of a space domain within every constitutions of space domain.
27. Broadly it amounts to manifestation of a cube within a cube.
28. The chase feature of this domain is the dynamic state solid within 3-space.
29. Like that, a step head is going to be a dynamic state four space domain within 4-space itself.
30. In general dynamic state hyper cube n within hyper cube n domain is the general feature of Ganita Sutra 11.
31. Let us a paused here and to sequentially chased dynamic state solid within 3-space.
32. Step wise, this chase would be following feature:-
Step 1:- Let cube is the representative regular body of 3-space. It has such accepts value '3'.
Step 2:- The motion of cube along its axis (of linear order), will add value '1' and their by there would be a reach a value $1+3 = 4$.
Step 3:- 3 dimensional frame is set up of 3 linear dimensions and such this dimensional frame contribute value $3 \times 1 = 3$. With this contribution, the value comes to be $1+3+1 \times 3 = 7$.
Step 4:- The motion of solid would be towards all the three axes and their by the total value would come to be $3 \times 7 = 21$.
33. One may have pause here and take note that value 21 permits reorganization $21 = 1+2+3+4+5+6$.

34. A step head, as the cube is with a cube, as such it shall acquiring addition value '3', with which the grand summation value of a dynamic state solid with a cube will take us to $21+3 = 24$.
35. One may have pause here and take note that value 24 accepts re-organization as $24 = 3 \times 8$, which is parallel to 24 quardinate of solid boundary of 8 component of hypercube 4.
36. Still further value $24 = 6 \times 4$ will bring us face to face with the dimensional value of creative dimensional frame of self-referral domain.
37. One may have pause here and take note that the split of 3-space into 8 octants amount to release of 4 space at the centre of the cube and there would be transcendence of 12 edged cube which will manifest and additional edge 13 edge with an four space.
38. One may have pause here and take note that within 4-space, solid boundary of eight component will accepts quardination in terms of $8 \times 4 = 32$ quardination and same together with 13 edges setup of the cube with an four space will make value $32+13 = 45$.
39. It would be a blissful to take note that $45 = 1 + 2 + 3 + 4 + 5 + 6 + 7 + 8 + 9$.
40. It would be a blissful to take note that *MANSAARA* scripture of Sathapatya up-Ved enlighten that there are 13 internal devas and 32 external devas.
41. It would be a blissful to take note $9 = 3^2$.
42. And $8 = 2^3$.
43. One shall sit comfortably and permit the transcending mind to glimpse and imbibe above features of dynamic state existence within 3-space which result into transition and transformation by transcendence at the origin into 4-space.

44. It is this feature which bring us face to face with the format feature, values and virtues of Triloki (3 spaces simultaneously manifesting within 3-space domain.
45. This 3 fold manifestation is as of interval, square and cube as of sequential steps of single double and the all the three dimensions coming into play.
46. Here it would be a blissful exercise the internal structure setup of cube accepts a three dimensional frame of 3 spatial dimensions which split 3 space into 8 octants and these octants stands coordinated as solid boundary of spatial order of 4 space.
47. The transition from a dimensional frame of linear dimensional to a dimensional frame of spatial dimensions, bring to focus the mathematics of bridging the gaps of transition from linear order setup to spatial order setup.
48. One may have pause here and take note that linear dimensions synthesized and lead to dimensional synthesis values sequence being: (... -21, -15, -10, -6, -3, -1, 0, 1, 3, 6, 10, 15, 21 ...).
49. Spatial dimensions synthesis value sequence comes to be: (... -12, -10, -8, -6, -4, -2, 0, 2, 4, 6, 8, 10, 12 ...).
50. It would be a blissful to revisit above pair of synthesis value sequences of linear order dimensions and of spatial order dimensions and to glimpse and imbibe the transition gaps values and reach at the way these gaps stand bridged.



**TRANSITION GAPS VALUES SEQUENCES OF
LINEAR ORDER AND SPATIAL ORDER
SYNTHESIS VALUES**

11. Linear order dimensions synthesis values sequence (sequence -1) is as:
(... -21, -15, -10, -6, -3, -1, 0, 1, 3, 6, 10, 15, 21 ...).
12. Spatial order dimensions synthesis value sequence (sequence 2) is as:
(... -12, -10, -8, -6, -4, -2, 0, 2, 4, 6, 8, 10, 12 ...).
13. One may have pause here and take note that the difference of above sequence 1 (linear order dimensions synthesis values) and sequence 2 (of spatial order dimensions synthesis values comes to be as under)

Sequence 2 – Sequence 1:

- (... 9, 5, 2, [0, -1, -1, 0, 1, 1, 0,] -2, -5, -9 ...).
14. The above differences value sequence (sequence 3) is designated as zero stage differences values sequences.
15. **First stage difference values sequence (sequence four):**

Sequence four is the sequence of sequential differences of the values of sequence 3.

Sequence four:

sequence four comes to be as under:

(... -6, -5, -4, -3, -2, -1, 0, 1, 1, 0, -1, -2, -3, -4, -5, -6 ...).

Second stage value differences sequences (sequence five):

The sequence of value differences of sequential of sequence four is designated as sequential five.

Sequence five:

Sequence five is values as under:

(... 1, 1, 1, 1, 1, 1, 0, -1, -1, -1, -1, -1, -1, ...).

Third stage value difference sequence (sequence 6):

Sequence six is the sequence of differences values of constitutive values of sequence 5.

Sequence six:

sequence six is of values as under:

(... 0, 0, 0, [0, -1, -1, 0,] 0, 0, 0 ...).

Fourth stage value difference sequence (sequence 7):

Sequence 7 is the sequence of difference of constitutive value of sequence 6.

Sequence seven:

Sequence 7 is of value as follow:

(... 0, 0, 0, [0, -1, 0, 1, 0,] 0, 0, 0 ...).

16. One may have pause here and take note that the chain of sequence of differences of constitutive values of given sequence leads to another sequence.
17. In this series /chain of sequence of difference of values, from sequence 6 onwards, the central values form a group and another side the central group of values, theirs remain is equal values.
18. It is this feature which deserved to be comprehended well.
19. One may have pause here and take note that the central group of values constitutes a range of object image setup as if the centre of the central group of values is the placement of a mirror and first of the range is the reflection image of the second of the range.

20. One shall sit comfortably and permit the transcending mind to glimpse and imbibe format feature and value of this phenomenon.



3

**LINEAR ORDER AND ITS NEGATIVE
LINEAR ORDER**

28. 3-space mathematics is a mathematic of linear order.
29. 3-space domain accepts linear measure.
30. Measure go parallel to sequential progression of dimensions formats.
31. Domain within dimensional frame gets framed and permits coverage for its each constitutes in terms of the measure of its dimensions.
32. In the context of 3-space, the 3-space domain as fixation for its constitution in term of its dimensional measures available for all the dimensions.
33. Dimensional frame of 3-space being a setup of 3 dimensions as such there would be an availability of a linear measure for sequential progression chase along each dimensions. This availability of a measure with a working rule Ganita Sutra 1: 'one more than before, will help us exhausted coverage for the entries domain of a linear dimension.
34. One may have pause here and take note that proportionality sumitry rule of Ganita Upsutra 1 will

help have a chase of dimensional frame of other order as well.

35. One may have further have a paused here and take note that dimensional order itself is a one space domain in the role of dimensions of 3-space domain, as such one space as well having simultaneously play for its own dimensional order, which is a negative linear dimensional order, as and the same dimensions of dimensions of 3-space.
36. One may have further have a paused here and take note that the synthesis of linear dimensions is their because of the availability of dimensions of dimensions.
37. This sustainess of dimension of dimensions that way takes values is equal to value of dimensions to dimensions from the individual values a pair of dimensions getting synthesized.
38. One may have pause here and take note that linear dimension is of value '1'.
39. Pair of linear dimensions yield value ' $1+1 = 2$ '.
40. Out of this value, the value of dimension of dimensions is to be accounted for.
41. The value of dimension is dimension '-1'.
42. As such after accounting for '-1' out of value of pair of dimensional '2' there would emerged synthesized value after accounting for a value of dimensional of dimensional as ' $[(2)-(-1)] = 3$ '.
43. One shall sit comfortably and permit the transcending mind to glimpse and imbibe this synthesis values mathematics.
44. One shall fully comprehend and to completely appreciate the synthesis values mathematics of a pair of dimensions to acquire proper insight and to attain appropriate enlightenment.

45. A step head, a synthesis of triple dimensions will required that third dimension on its synthesis is to account for value equal to dimension of dimensions firstly for the synthesis of third dimensions, with the first dimension and secondly for the synthesis of third dimensions with the second dimensions.
46. One may have further have a paused here and take note that in respect of third dimension there would be accommodated of value twice of the value of dimensions of dimensions. As such the dimensional synthesis mathematics, at the stage would be following working steps:-
- Step 1** value of synthesis pair of linear dimensions = 3.
- Step 2** value of third dimensions = 1.
- Step 3** value of a pair of dimension of dimensions = -2.
- Step 4** dimensional synthesis values for triple dimensions
 $= 3+1-(-2) = 6$.
47. One may have pause here and take note that, it is this feature of linear dimensions synthesis values sequence (1, 3, and 6) for single, double and triple dimensions which deserve to be comprehended well.
48. One may have pause here and take note that it brings us face to face with organization of (1, 3, and 6) as (1, 1+2, 1+2+3).
49. It is sequential summation for values triple (1, 2, 3) which deserves to be comprehended well.
50. One may have a paused here and take note that values triple (1, 2, and 3) is unique as that none of theses accepts perfectos other than 1.
51. Further as that, the value triple (1, 2, 3) accepts organization as (1, 1+1, 1+1+1).

52. It further goes parallel to availability of single dimensional a pair of dimensional and all the triple dimensional of a three dimensional frame.
53. It would be blissful to sequential chase:
- xii. $(0, 0, 0)$.
 - xiii. $(1, 1, 1)$
 - xiv. $(1, 1+1, 1+1+1)$
 - xv. $(1, 2, 3)$
 - xvi. $(1, 1+2, 1+2+3)$
 - xvii. $(1, 3, 6)$
 - xviii. $(2-1, 2+1, 2-1+2-0+2+1)$
 - xix. $(2, 2, 2)$
 - xx. $(2, 4, 6)$
 - xxi. $(2, 6, 10)$
 - xxii. $(1+1, 3+3, 5+5)$
54. One shall sit comfortably and permit the transcending mind to glimpse and imbibe above format feature values and to acquire insight and enlightenment about the sequential linear order progression steps measure with the help of Ganita Sutra 1 and Ganita Upsutra 1. ■

SECTION 7

TRI-LOKI

1. Tri-loki literally means *Tri* (three) *Loki* (spaces).
2. Conceptually, Tri-loki is the Existence Phenomenon of 3-spaces set up within 3-space itself.
3. 3-spaces set up within 3-space, in its manifested form is the existence of interval, square and cube within a cube.
4. It may be accepted as a definition as that interval is the manifested body of 1-space, square is the manifested body of 2-space and cube is the manifested body of 3-space.
5. It shall be bringing us face to face with parallel format of 1-space, interval and of one axis of 3 dimensional frame.
6. Further as that, 2-space, square and a pair of axes of 3 dimensional frames are of parallel format features.
7. Still further, 3-space, cube and the set up of all the three dimensions of 3 dimensional frame beings of same format features.
8. One shall sit comfortably and to visit and to revisit set ups of interval within cube and of interval outside the cube.
9. Likewise, one shall visit and revisit the set ups of a square within cube and outside a cube.
10. Interval within a cube shall be a set up of points of 3-space contents.
11. Likewise, the square within a cube as well is going to be a set up of points of 3-space contents.
12. One may have a pause here and to comprehend the distinguish feature of an interval as a set up of points of

- 1-space content from that of the set up of points of 3-space contents.
13. Likewise, one shall comprehend the distinguish feature of the set up of square being of points of 2-space content form that of the set up of points 3-space contents.
 14. It would further be blissful to comprehend the distinguishing feature of outer and inner cube.
 15. The outer cube is having enveloping boundary which is a synthetic set up of 8 corner points, 12 edges and 6 surfaces.
 16. While on the other hand inner cube is a 3 space content lump within a bigger 3-space content.
 17. One shall sit comfortably and permit the transcending mind to fully glimpse and to completely imbibe the above distinguishing features of the set up of interval, square and cube within a cube from those of interval square and cube outside the cube.
 - 18.

SECTION 8

TRI-MURTI

TRI-MURTI

1. 'Brahma, Shiv and Vishnu' together are designated as 'Tri-Murti).
2. Idols of Brahma, Shiv and Vishnu are of features in manifested forms of 'Brahama, Shiva and Vishnu' respectively.
3. The features of Idols of Brahama, Shiv and Vishnu lead us to the features of values of 4, 5, and 6-space bodies.
4. These 4, 5 and 6-space bodies are in continuity of 1, 2 and 3-space bodies values.
5. Interval, square and cube are the bodies of 1, 2, and 3-space respectively.
6. The bodies of 1, 2, 3, 4, 5 and 6-space are designated as hyper cubes 1, 2, 3, 4, 5 and 6 respectively.
7. Hyper cubes 1, 2 and 3 together make 'Tri-Loki'.
8. Hyper cubes 4, 5 and 6 together make 'Tri-Murti'.

DOMAIN BOUNDARY RATIO

1. Hyper cube 1 (interval) is of a structural set up which accepts domain boundary ratio as $a^1:2b^0$.
2. Hyper cube 2 (square) is of a structural set up which accepts domain boundary ratio as $a^2:4b^1$.
3. Hyper cube 3 (cube) is of a structural set up which accepts domain boundary ratio as $a^3:6b^2$.
4. One may have a pause here and take note that hyper cubes 1, 2 and 3 accept a common domain: boundary formulation $a^N:2Nb^{N-1}$, $N = (1, 2, 3)$.
5. This as such makes $a^N:2Nb^{N-1}$, $N = (1, 2, 3)$ as a domain boundary formulation for Tri-Loki.

DOMAIN BOUNDARY RATIO OF TRI-LOKI

1. It would be blissful to take note that the above formulation $a^N:2Nb^{N-1}$, $N = (4, 5, 6)$ leads to domain boundary ratio of hyper cube 4, hyper cube 5 and for hyper cube 6 as well.
2. This, as such, makes formulation $a^N:2Nb^{N-1}$, as the common domain boundary ratio formulation for Tri-Loki (hyper cube 1, 2, 3) and also for Tri-Murti (hyper cube 4, 5, and 6).

CUBE AS HYPER CUBE 3

1. It would be blissful exercise to glimpse and to imbibe the features of values of the structural set up of cube of hyper cube as a 4 folds manifestation layer (1, 2, 3, 4)/(1-space as dimension, 2-space as boundary, 3-space as domain and 4-space as origin).

2. It would further be blissful to express cube as hyper cube 3 of 4 folds manifestation layer (1, 2, 3, 4) as a spatial case of $(N, N+1, N+2, N+3)$ for $N=1$.

4 FOLDS MANIFESTATION LAYER $(N, N+1, N+2, N+3)$

1. It would be blissful to visit interval as hyper cube 1 of four folds $(N, N+1, N+2, N+3)$ for $N = -1$.
2. It would further be blissful to visit square as hyper cube 2 of four folds $(N, N+1, N+2, N+3)$ for $N = 0$.
3. It would further be blissful to visit cube as hyper cube 3 of four folds $(N, N+1, N+2, N+3)$ for $N = 1$.
4. It would further be blissful to visit 4-space body as hyper cube 4 of four folds $(N, N+1, N+2, N+3)$ for $N = 2$.
5. It would further be blissful to visit 5-space as hyper cube 5 of four folds $(N, N+1, N+2, N+3)$ for $N = 3$.
6. It would further be blissful to visit 6-space as hyper cube 6 of four folds $(N, N+1, N+2, N+3)$ for $N = 4$.

DIFFERENT ROLES OF 1-SPACE

1. 1-space plays the role of dimension of 3-space.
2. 1-space also plays the role of boundary of 2-space.
3. 1-space is a domain fold of hyper cube 1.

GLIMPSE AND IMBIBE THE VALUES OF DIFFERENT ROLES OF 2-SPACE

1. Likewise, it would be blissful to glimpse and imbibe the values of different roles of 2-space.
2. 2-space plays the role of boundary of 3-space.
3. 2-space is domain fold of hyper cube 2.
4. 2-space plays the role of dimension of 4-space.

GLIMPSE AND IMBIBE DIFFERENT ROLES OF 3-SPACE

1. Cube is the representative regular body of 3-space.
2. Solids are 3-space bodies.
3. 4-space as a solid boundary.
4. Glimpse and imbibe the role of 3-space as boundary of 4-space.



SHORT QUESTIONS

DEFINITIONS

1. Define 3-space.
2. Define 3-space body.
3. Define 3 dimensional frame
4. Define origin of 3-space.
5. Define origin of 3 dimensional frame
6. Define different role of 3-space
7. Define representative regular body of 3-space.

ENLIST FEATURES

1. Express features of 3-space as domain fold
2. Express 3-space as boundary fold.
3. Express 3-space as dimensional fold.
4. Express 3-space as origin fold.

CHASE

1. Chase split of a 3 dimensional frame into a pair of 3 dimensional frames of half dimensions.
2. Chase cube as a set up of 8 sub cubes.
3. Chase synthesis of 8 cubes.

CONSTRUCTION

1. construct

SECTION-1

INTRODUCTORY

- | | | |
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| | (XVII) 3-space mathematics technical terms.
2 to 4 | |
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VEDIC MATHEMATICS OF 3-SPACE

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3-SPACE DOMAIN

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SECTION-1

INTRODUCTORY

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**VEDIC MATHEMATICS
TEXTBOOK CLASS IX**

SECTION-1

1

TECHNICAL TERMS

(I)

3-SPACE MATHEMATICS

TECHNICAL TERMS

35. 3-space.

3-space is a space within a 3 dimension frame of 3 dimensional layer and cube and sphere being its representative regular bodies.

36. 3 dimensional frames.

3 dimensional frame is set of 3 dimensional layers and an origin.

37. Linear dimension.

1-space plays the role of dimension.

38. 3-space content.

- 3-space content within a 3 dimensional frame is designated as 3 space contents.
39. 3-space body.
3-space contain manifest a 3 space body.
40. Representative regular body of 3-space.
A 3-space body which does not refer any dimension on any other any dimension is designated representative of a regular body. Cube is the representative of 3-space body any dimension on any other dimensional. Likewise sphere is also a representative a regular of 3-space as sphere also is not preferring any dimension any other dimension.
41. Hypercube 3.
Hypercube 3 is a 3-space body with 1 space playing the role of dimension, 2-space playing the role of boundary, 3-space playing the role of domain, 4-space playing the role of origin. Cube is hypercube 3.
42. Linear dimension.
Linear dimension means 1-space playing of dimension.
43. Spatial boundary.
Spatial boundary means 2-space playing a role of boundary.
44. Solid domain.
Solid domain means 3-space playing role of domain.
45. Creative origin.
Creative origin means 4-space the playing the role of origin.
46. Transcendental base.
Transcendental base means 5-space playing the role of base of origin fold of hypercube.
47. Self referral format.

Self referral format means 6-space playing the role of format for base of transcendental base.

48. Unity space.

Unity space means 7-space playing the role of unity state of self referral format.

49. Natural resource.

Natural resource means 8-space as source of unity state.

50. Barhman reservoir.

Barhman reservoir means 9-space as reservoir of natural sources values.

51. 3 dimensional frame:-

21) 3 dimensional frame is setup 3 linear dimension and one origin.

22) 3 dimensional permits split into a pair of 3 dimensional frames of half dimensions of opposite orientations.

23) Within each corner point of a cube is imbedded a 3 dimensional frame of half dimensions. One 3 dimensional frame of full dimension is of a placements with origin at the seat of center of cube.

24) Each corner point of cube is a seat of origin of a 3 dimension frame of half dimension imbedded here with origin of placement at the corner point.

25) The second dimensional frame of half dimension is in un-manifests form. It may be said that the second 3 dimensional framed of half dimensional owns its existence but is not barking its presence here.

26) This un-manifest 3 dimensional frame of half dimension, as such is designated as a black 3 dimensional frame of half dimensions, while the first 3 dimension frame of half dimension is designated as white dimensional frame.

- 27) While 3 dimensional frame has in word orientations for its axes, while white 3 dimensional has its orientation outwards.
- 28) Black 3 dimensional frame is in the outward space, a four space outside the 3-space body (cube).
- 29) White 3 dimension frame is within 3-space itself, at the boundary of 4-space.
- 30) 8 white 3 dimensional frame with origin at corner point of cube and ninth 3 dimensional frame with in cube itself with the origin of centre of cube sustain 3-space body in an integrated state.

(II)

SPACE AND SPACE CONTENTS

41. Space is the 5th element.
42. First four elements are earth, water, fire, air.
43. These five elements 'earth, water, fire, air and space' are the designated as punch maha-bhut accepts transcendental code value 40.
44. The number value 40 is parallel to 40 coordinate fixation of creative boundary of transcendental domain (4-space) of ten components as boundary of transcendental domain.
45. Formulation 'Akash' accepts transcendental code value '8'.
46. One may have a pause here and to take note that $40 = 5 \times 8$.
47. It would also be relevant to take note that formulation 'ek' accepts transcendental code value '8'.

48. 5-space accepts a dimensional frame of 5 solid dimensions (3-space in the role of dimensions of 5-space).
49. Formulation '*tray*' as well accepts transcendental code value '8'.
50. Formulation '*punch*' accepts transcendental code value '15'.
51. One may have a pause here and to take note that the dimensional value of 5 solid dimensions (3-space as dimensions) leads to $3 \times 5 = 15$ value.
52. It would further be relevant to take note that 1-space play the role of dimension 3-space, 2-space play the role of dimensions of 4-space, 3-space play the role of dimension of 5-space, 4-space play the role of dimensions of 6-space.
53. One may have a pause here and to take note that linear order four folds manifestation layer (1, 2, 3, 4) of hypercube 3 is of a summation value $(1+2+3+4) = 10$.
54. Further as that solid order manifestation layer $(3+4+5+6)$ of hypercube 5 leads to summation value $(3+4+5+6) = 18$
55. It is this relationship of hypercube 3 with hypercube 5 which deserves to be comprehended well to appreciate dimensionalization of space.
56. One of the basic features of this dimensionalization is that space as space content sequentially unfolds itself as a range of hyper cubes of simultaneously manifestation of 4 consecutive dimensional spaces contents illustratively 1-space (as 1-space contents), 2-space (as 2-space contents), 3-space (as 3-space contents), and 4-space (as 4-space contents) simultaneously manifests as hypercube 3 with 1-space contents playing the role of linear dimension, 2-space contents playing the role of a spatial

- boundary, 3-space contents playing the role of a solid domain and 4-space contents playing the role of origin fold of hypercube 3.
57. In general hypercube N is a set up of a four folds manifestation layer $(N-2)$ space being dimension fold, $(N-1)$ space being boundary fold, (N) space being domain fold, $(N+1)$ space being its origin fold.
 58. One shall sit comfortably and permit the transcending mind to glimpse space as a space content unfolding itself at creative boundary of transcendental domain as a manifested range of hypercube of 4 folds dimensional space contents.
 59. One may further have a pause here and to take note that one of the basic feature of dimensional space (content) is that it distinctively placed at a time the role of a distinct fold of manifested creations as of hypercube formats.
 60. It is this feature of space content deserves to be comprehended well.

(III)

BASIC POSER AND ELOBRATION

11. Define 3-space.
Space approached by a dimensional frame 3 linear dimension is designated '3-space'.
12. Elaborate 3 dimensional frame

1-space in the role of dimension makes a linear order. 3 linear dimensions synthesis a 3 dimensional frames. Synthesis of dimension is there because of availability of spatial order for the common origin for all the 3 dimensions.

13. What are the features of origin of a 3 dimensional frame
2-space plays the role of supplier of structures for the origin placed within creator space (4-space).It is a spatial order phenomenon of 4-space within reach is seated origin of 3 dimensional frame.
14. An elaborate role of 1-space as dimensions of 3-space
Here 1-space means 1-space content the referred role of 1-space, in fact, is the role of 1-space content.
15. Elaborate 1-space content
Space as space content permits approached to it in terms of dimensional frames. When space is approach by single dimension, by space comes within comprehension as one space and the domain fold content of 1-space body becomes the expression of 1-space contents

(IV)

3-SPACE MATHEMATICS

BASIC POSER AND ELOBRATION

11. What is the domain of 3 space mathematics?

It is all about the mathematical reachable values are 3-space.

12. What is the values range of 3-space?

It is parallel to space reachable by a linear order.

13. What are the features of a linear order?

1-space content in the role of dimension makes a linear order. 3 linear dimensions synthesis a 3 dimensional frame.

14. How linear dimensions synthesis as a dimensional frame?

The availability of common origin of spatial structure results into synthesis of a 3 dimensional frames as a setup of 3 dimensions and a common origin of spatial order.

15. What is the virtue of one space content?

Space content when is approached by a single dimension it permits its comprehension and reach as 1-space contents.

3-SPACE MATHEMATICS VALUES COMPILATION

(I)

PRELIMENARLY

11. 3-space is a linear order space it manifest a hypercube 3 format.

12. Hypercube 3 format is four folds format of 1-space as dimensional fold, 2-space as boundary fold, 3-space as domain fold and 4-space as origin fold.
13. 3-space domain as a framed domain with a sealed origin, in its dynamic state swaps outside space on a special (boundary) format.
14. Within framed 3-space domain of a sealed origin, the chase of 3-space body in static as well as in dynamic state bring to focus the features of 3-space contents lamb and as discrete entities, as well as a continenom phenomenon.
15. 2 fold frames of 3-space domain firstly as a dimensional frame and secondly as a spatial enveloping frame, have there distinct roles in the existence phenomenon of 3-space.

(II)

3-SPACE MATHEMATICS WORKS OUT THE EXISTENCE PHENOMENON OF 3-SPACE

3. 3-space mathematics is basis base mathematics of 3-space VMS & T.

(III)

BASIS BASE SUTRAS

19. Athrav Ved Ganita Sutras and upsutras are the basis base sutras of mathematics of the discipline of Vedic Mathematics, Science & Technology.
20. Vedic Mathematics, Science & Technology as a reached at dimensional space wise distinct values.
21. Ganita Sutras and upsutras help reach at dimensional space wise distinct values of Mathematics, Science & Technology.
22. As such Ganita Sutra and upsutras are the basis base sutras of 3-space mathematics as well.
23. The basic approach mathematical domain in sequential phases. Arithmetic is approach in algebraic format, algebra is approach in geometric format, geometry of manifestations format, manifestations are approached upon transcendence format which sequentially go self-referral, and of unity state with natural source reservoir been fountained from Brahman virtues.
24. Measures as well go transcendental generation way as counts, units, strings, layers, ranges, folds and of cyclic orders.
25. 3-space mathematics domain focus upon counts and units taking counts as measures for pre dimension roles and units being of dimensional domains.
26. A step head, transcendence through origin fold as its reach up till the base fold, as the fifth fold. It infects amounts to transition and transformation for the linear order into spatial order. And like that, sequentially the transcendence through compactified origins take ahead and ahead.
27. The general outline of Teaching and Learning of Vedic Mathematics may of following features.



VEDIC MATHEMATICS
TEXT BOOK CLASS IX

SECTION-4

VEDIC MATHEMATICS OF 3-SPACE

LESSONS

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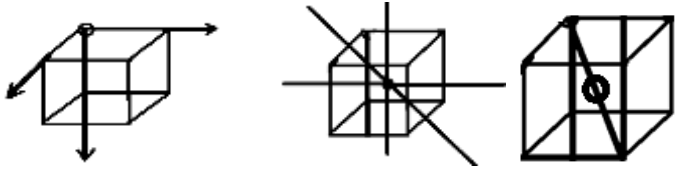
LESSON – 01

CUBE



1. Cube is a representative regular body of 3-space.
2. It is a regular body as here no axis is preferred over any other axis.
43. Cube has a geometric envelop stitched by 8 corner points, 12 edges and 6 surfaces making it a set up of $8 + 12 + 6 = 26$ structured components.
44. Volume of the cube as one another structural components makes the total structural components being $26 + 1 = 27$.
45. Number value 27 accepts re-organization as $27 = 3 \times 3 \times 3 = 3^3$.
46. Corner points are of 'zero volume, zero area and zero length'.
47. Edges are of 'zero volume and zero area'.
48. Surface plates are of 'zero volume'.
49. Volume avails all the three axes.
50. Surface avails a pair of axes.
51. Edge avails a single axis.
52. Corner points are devoid of all the axes.

53. Each corner points are a meeting point three edges.
54. Each surface is enveloped by four edges.
55. Volume is enveloped by geometric envelope stitched by 8 corner points, 12 edges and 6 surfaces.
56. Cube accepts 4 internal diagonals.
57. These internal diagonals meet at a point designated as center of the cube.



58. In each corner point meet three edges, which also play as axis.
59. At center of the cube can be embedded a dimensional frame of three axes.
60. These three axes and center of the cube as origin of three dimensional frames make a set of 4 structural components.
61. These four structural components (three axes and fourth origin / center) together with other 27 structural components of the set up of the cube (8 corner points, 12 edges, 6 surfaces and 1 volume) together make out a set up of 31 structural components.
62. These 31 structural components together with 4 internal diagonals make out an extended set up of $31 + 4 = 35$ structural components. ■

LESSON 2

INTERVAL, SQUARE AND CUBE:

49. 3 dimensional frame structures space.
50. So structured space in terms of 3 dimensional frame of 3 axes lines is designated as a 3 space set up.
51. Cube is the structured body of this 3 space.
52. 3 axes sequentially structure interval, square and cube.
53. This sequential structuring by 3 axes is a sequential structuring of 3-space.
54. These 3 space structures become the structures within cube itself.
55. It leads to sequential reach of structured cube within a cube.
56. Single axis formats interval.
57. Pair of axis format square.
58. Cube is formatted by all the 3 axes.
59. Interval has length (A^1) and a pair of end point $(2A^0)$.
60. These together make a set up $(A^1 + 2A^0)^1$.
61. Square has area (A^2) , 4 boundary lines $(4A^1)$ and 4 corner points $(4A^0)$.
62. These structural components of square make a set up $(A^2 + 4A^1 + 4A^0) = (A^1 + 2A^0)^2$.
63. Structural component of cube are volume (A^3) , 6 surface plates $(6A^2)$, 12 edges $(12A^1)$ and 8 corner points $(8A^0)$.
64. This structural set up leads to $(A^3) + (6A^2) + (12A^1) + (8A^0) = (A^1 + 2A^0)^3$.
65. These structural components set ups of interval, square and cube accept common value formula $(A^1 + 2A^0)^n$, $N = 1 + 2 + 3$.

66. It would be interesting to note that cube structured within a cube will itself further accept another cube to be structured within it.
67. And this sequence may continue infinitely.
68. Likewise the square within a cube as well permit structuring of a square inside it.
69. And a step ahead there would be a reach for a structured square within the structured square within square within cube.
70. And this sequence as well may continue infinitely.
71. Likewise would be a situation in respect of intervals within a cube as well.
72. This will lead us to infinite sequence of intervals, squares and cubes within cube.



LESSON-3

POINTS OF INTERVAL SQUARE AND CUBE

29. Point of interval has length, howsoever small it may be.
30. Point of a square has area howsoever small it may be.
31. Point of a cube has volume howsoever small it may be.
32. Line within a cube is a set up of points of a cube.
33. Square within a cube is a set up of the point of the cube.
34. This will help us distinguish points of interval within cube and of an interval outside the cube.
35. Likewise, it will also help us distinguish point of a square within a cube from that of a square outside the cube.

36. Likewise the point of interval within square is distinguishable from the point of interval outside the square.
37. Further interval provides a format for setting of the points devoid of length.
38. Likewise square provides a format for setting of points devoid of area, as well as devoid of length.
39. Cube provides a format for setting of points devoid of volume, as well as devoid of area and also devoid of length.
40. It would be a blissful exercise to distinguish interval as a format for setting of points devoid of length from the interval as the set up of points imbedded with length, howsoever small the same may be.
41. A step ahead, it would be a blissful exercise to distinguish square as a format for setting of points of interval devoid of area from that of a square as a set up of points imbedded with area howsoever small it may be.
42. And further it would also be a very blissful exercise to distinguish cube as a format for setting of surface plates devoid of volume from that of cube as a set up of point imbedded with volume howsoever small the same may be. ■

LESSON -4

CONCEPT OF STRUCTURED POINT

19. The concept of a structured point is the basic concept.
20. Point of a line is imbedded with the structures of a line.

21. The point of square is imbedded with the structures of an area.
22. Point of cube is imbedded with the structures of volume.
23. Point devoid of structures of volume is not the point of cube
24. Point devoid of structures of area is not a point of square.
25. Point devoid of structures of length is not a point of an interval.
26. A point devoid of structures of volume, area and length may be designated as a void point or a point simpliciter, outside the 3 dimensional frames.
27. Point within a 3 dimensional frame may get fulfilled with structures because of a single axis and by a pair of axes and even due to the presence of all the 3 axes.



LESSON-5

DUAL STATUS OF CENTRE OF A CUBE

39. Centre of the cube is uniquely placed being at an equal distance from all the corner points of the cube.
40. This unique placement of centre distinguishes it from all other points of the cube.
41. This uniqueness makes centre to be of a dual status, firstly like all other points of the cube and secondly because of its uniqueness from all other points of the cube.
42. Centre of the cube is the collapse point of all the corner points of the cube.
43. In fact centre is the collapse point of the cube itself.
44. Cube is the seat of inner most corner points of all 8 sub cubes of the cube.
45. This way centre of the cube gets enveloped by super imposition of the inner most corner point of the sub cubes.
46. This makes 9 point fixation for the centre of the cube.
47. Placement space of the centre of the cube with its enveloping by 8 inner most corner points of sub cubes makes centre of the cube as a placement seat devoid of the structures of the cube points.
48. This status of the centre of the cube as placement seat of space beneath the centre as point of the cube brings to focus the nature of dual status of the centre of the cube.
49. This makes status of centre of the cube being parallel to the status of origin of dimensional frame of 3-space

- and also further being parallel to that of the origin of 3-space itself as well.
50. It brings to focus the feature of seat of centre of cube being enveloped within a solid boundary of 8 components (sub cubes of the cubes) itself.
 51. Cube itself is enveloped by 6 surface plates.
 52. Each surface plates of cube is enveloped by 4 intervals (edges) as boundary line of a square.
 53. Each edge is bounded by a pair of end points (corner points).
 54. It makes a blissful sequence that edges are bounded by a pair of corner points, surface plates are bounded by 4 edges, volume of the cube is enveloped by 6 surface plates and centre of the cube is enveloped by 8 sub cubes.
 55. It would be blissful to comprehend and imbibe this feature of pair of end points, 2 pairs of boundary lines, 3 pairs of surfaces and 4 pairs of solids (sub cubes). All marking their presence simultaneously in the structural set up of the cube as the representative regular body of 3-space within a 3 dimensional frame of 3 axes.
 56. It would be blissful to take note that these sequential values of 2 points, 4 lines, 6 surfaces and 8 solids at the boundary in fact are sequentially taking us to interval as 1 space body of single axis format, surface as a 2 space body of a pair of axes format, cube as a 3 space body of 3 axes format and ahead there being a 4 space body accepting solids at its boundary, while solid itself is accepting surfaces at its boundary and surfaces are accepting lines at their boundary and lines themselves are accepting points at their boundary.
 57. It is blissful that, that way, we have reached a step ahead of solids, a step which takes us in a space ahead of 3-

space.



LESSON-6

SYNTHESIS OF 2, 4 & 8 CUBES/

8 SUB CUBES AS A CUBE

43. A cube is a structural set up of 8 corner points, 12 edges, 6 surfaces and 1 volume, together making it a set up of 27 structural components.
44. When 2 cubes of 27 structural components each are synthesized together with one of the surface plate being the common separating surface for both the cubes, it shall be dispensing with the structural components of one of the surface plate.
45. One surface plate is (a square) is a set up of 9 structural components namely 4 corner points, 4 edges and 1 surface area.
46. Therefore, a pair of cubes of 27 structural components each, together making a set of $27+27= 54$ structural components, on their synthesis will get reduced to a synthetic set up of a pair of cubes being of $27+27-9= 45$ structural components only.
47. It may be taken as that the first cube contributes its all the 27 structural components while the second cube to contribute only $27-9= 18$ components only.
48. This synthetic set up of a pair of cubes, as of 45 structural components will be of following classification for these structural components:

Cube	Corner points	Edges	Surfaces	Volume	Total
First	8	12	6	1	27
Second	4	8	5	1	18
Total:	12	20	11	2	45

49. Now when third cube is synthesized with the above set up of a pair of cubes, there would be a further contribution of 18 structural components by the third cube.
50. One may note that while third cube will be synthesizing itself with the above synthetic set up of a pair of cubes, the structural component of one of the surface plate will get dispensed with.
51. The resultant structural component of synthetic set up of 3 cubes would be as of $27+18+18= 63$ structural components accepting classification as under:

Cube	Corner points	Edges	Surfaces	Volume	Total
First	8	12	6	1	27
Second	4	8	5	1	18

Third	4	8	5	1	18
Total:	16	28	16	3	63

52. Now when one more cube, namely fourth cube would be synthesized with the above synthetic set up of 3 cubes, the contribution because of the fourth cube would be only of 12 structural components, as in this situation 2 of the surface plates will get dispensed with.
53. As a result, the synthetic set up of 4 cubes will make a set up of 75 structural components accepting following classification:

Cube	Corner points	Edges	Surfaces	Volume	Total
First	8	12	6	1	27
Second	4	8	5	1	18
Third	4	8	5	1	18
Fourth	2	5	4	1	12
Total:	18	33	20	4	75

54. A step ahead, when fifth cube would be synthesized with the above synthetic set up of 4 cubes, it shall be contributing only 18 structural components and thereby making synthetic set up of 5 cubes being of $75+18 = 93$ structural components accepting following classification:

Cube	Corner points	Edges	Surfaces	Volume	Total
First	8	12	6	1	27
Second	4	8	5	1	18
Third	4	8	5	1	18
Fourth	2	5	4	1	12
Fifth	4	8	5	1	18
Total:	22	41	25	5	93

55. A step ahead, synthetic set up of 6 cubes is going to be a structural set up of 105 structural components of following classification:

Cube	Corner points	Edges	Surfaces	Volume	Total
------	---------------	-------	----------	--------	-------

First	8	12	6	1	27
Second	4	8	5	1	18
Third	4	8	5	1	18
Fourth	2	5	4	1	12
Fifth	4	8	5	1	18
Sixth	2	5	4	1	12
Total:	24	46	29	6	105

56. . A step ahead, synthetic set up of 7 cubes is going to be a structural set up of 117 structural components of following classification:

Cube	Corne r points	Edge s	Surface s	Volum e	Tota l
First	8	12	6	1	27
Second	4	8	5	1	18
Third	4	8	5	1	18
Fourth	2	5	4	1	12
Fifth	4	8	5	1	18

Sixth	2	5	4	1	12
Seventh	2	5	4	1	12
Total:	26	51	33	7	117

57. Finally the synthetic set up of 8 cubes/sub cubes, as a cube shall be becoming a structural set up of 125 structural components accepting following classification:

Cube	Corner points	Edges	Surfaces	Volume	Total
First	8	12	6	1	27
Second	4	8	5	1	18
Third	4	8	5	1	18
Fourth	2	5	4	1	12
Fifth	4	8	5	1	18
Sixth	2	5	4	1	12
Seventh	2	5	4	1	12
Eighth	1	3	3	1	8
Total:	27	54	36	8	125

58. It would be blissful to take note that $8 = 2^3$ number of cubes synthesize a structural set up of $125 = 5^3$ number of structural components.
59. One may have a pause here that square as 2 space body as linear boundary of 4 components and this makes 5 versions of square parallel to presence of boundary components of 4, 3, 2, 1, 0 in number and it will help us acquire insight as to the feature of 2^3 number of cubes synthesizing a structural set up of 5^3 structural components.
60. It would be a blissful exercise to chase further as that $3^3 = 27$ cubes shall be synthesizing a structural set up of $7^3 = 343$ structural components.
61. Here it would be blissful to take note that cube; the representative regular body of 3-space accepts 7 versions.
62. A step ahead, 4^3 numbers of cubes synthesize a structural set up of 9^3 structural components and that 4 space body as 9 versions.
63. In general N^3 cubes synthesize a structural set up of $(2N+1)^3$ structural components.



LESSON-7

DIAGONALS AS TRANSLATION PATHS FOR DIMENSIONAL FRAMES IMBEDDED IN CORNER POINTS OF CUBE

29. In each corner point of a cube is imbedded a 3 dimensional frame of half dimension.
30. The orientation of all the $8 \times 3 = 24$ (Half axes) is inward towards centre of the cube.
31. These 8 three dimensional frames (Half dimension) are coordinated in 4 pairs by the 4 internal diagonals of the cube.
32. Diagonal is a translation path for the pair of 3 dimensional frames of half dimensions imbedded in the end points of the diagonals (being the corner points of a cube).
33. The 3 dimensional frames imbedded in the end points of the diagonal translate inward towards centre of the cube along the coordinating diagonal as the translation path.
34. The pair of 3 dimensional frames, while during translation, their origins reach at centre of the cube, this pair of 3 dimensional frames of half dimensions synthesize in to a 3 dimensional frames of full dimensions.
35. This way there get synthesized quadruple number of 3 dimensional frames of full dimensions.
36. These quadruple 3 dimensional frames of full dimensions together with a 3 dimensional frames already available with its origin super imposed upon the centre of the cube, makes a set up of 5 three

- dimensional frames with their origins at centre of the cube.
37. It would be relevant to take note that at centre of the cube is the seat of 4-space.
 38. And 4 space body has 9 versions parallel to 9 geometries range of 4 space of which 5 are non-negative signatures, and at the same time 5 are of non-positive signatures.
 39. This makes 10 directional flows parallel to 10 directional translations permissible as along pair of orientations of quadruple diagonals and as along upward and downward orientation of the 3 dimensional frames with origin at the centre.
 40. This feature of 10 directional translation paths and a set up of $3 \times 5 = 15$ dimensional frames available at centre of the cube deserves to be comprehended well.
 41. The finding factor $(3/2)$ coordinating values pair $(10, 15)$ is parallel to the coordinating factor of the structural contribution by the cubes $(27, 18, 12, 8)$ diminishing as values $(9, 6, 4)$ being of the feature $4 \times 3/2 = 6, 6 \times 3/2 = 9$.
 42. It would be blissful to take note that this is a progression factor for reach from value 2 to value 3 with $3 = 2 \times 3/2$.



LESSON-8

SYNTHESIS OF 2, 3 & 4 SQUARES/ QUARTER SQUARES OF A SQUARE

13. It would be a blissful exercise to chase sequential synthesis of 2, 3 & 4 squares/quarter squares of a square.
14. It would be relevant to take note that square is a set up of 9 structural components in all of which 4 are corner points, 4 are boundary lines and 1 is surface area.
15. When one square synthesizes with another square, one of the edges gets dispensed with as there being a common edge during the synthetic set up for a pair of squares.
16. This would amount to dispensing with 3 structural components because of edge and its pair of end points getting super imposed upon another edge and its corner points.
17. This way while the contribution for this synthetic set up by the first square is going to be of 9 structural components, however, in respect of the second square this contribution is to remain only of 6 structural components.
18. The third and fourth quarter squares contribution in the synthetic set up is going to be 6 and 4 structural components respectively. It would be blissful to take note that the values triple (9, 6, and 4) accept coordinating factor (3/2).



SECTION-7

3-SPACE DOMAIN

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| 10. Dynamic State Solids Within 3-Space | 2 to 5 |
| 11. Transition Gaps Values Sequences
Of Linear Order And
Spatial Order Synthesis Values | 5 to 7 |
| 12. Linear Order And Its Negative
Linear Order | 7 to 10 |

SECTION-7
3-SPACE DOMAIN

1

DYNAMIC STATE SOLIDS WITHIN 3-SPACE

51. Ganita Sutra 11 '*vyasti-samashiti*' conceptually is the mathematical domain of 'part as a whole'. This amounts to acceptance of complete structure of a space domain within every constitutions of space domain.
52. Broadly it amounts to manifestation of a cube within a cube.
53. The chase feature of this domain is the dynamic state solid within 3-space.
54. Like that, a step head is going to be a dynamic state four space domain within 4-space itself.
55. In general dynamic state hyper cube n within hyper cube n domain is the general feature of Ganita Sutra 11.
56. Let us a paused here and to sequentially chased dynamic state solid within 3-space.
57. Step wise, this chase would be following feature:-
Step 1:- Let cube is the representative regular body of 3-space. It has such accepts value '3'.
Step 2:- The motion of cube along its axis (of linear order), will add value '1' and their by there would be a reach a value $1+3 = 4$.
Step 3:- 3 dimensional frame is set up of 3 linear dimensions and such this dimensional frame contribute value $3 \times 1 = 3$. With this contribution, the value comes to be $1+3+1 \times 3 = 7$.
Step 4:- The motion of solid would be towards all the three axes and their by the total value would come to be $3 \times 7 = 21$.
58. One may have a pause here and take note that value 21 permits reorganization $21 = 1+2+3+4+5+6$.
59. A step head, as the cube is with a cube, as such it shall acquiring addition value '3', with which the grand

- summation value of a dynamic state solid with a cube will take us to $21+3 = 24$.
60. One may have a pause here and take note that value 24 accepts re-organization as $24 = 3 \times 8$, which is parallel to 24 co-ordinate of solid boundary of 8 component of hypercube 4.
 61. Still further value $24 = 6 \times 4$ will bring us face to face with the dimensional value of creative dimensional frame of self-referral domain.
 62. One may have a pause here and take note that the split of 3-space into 8 octants amount to release of 4 space at the centre of the cube and there would be transcendence of 12 edged cube which will manifest and additional edge 13 edge with an four space.
 63. One may have a pause here and take note that within 4-space, solid boundary of eight component will accepts co-ordination in terms of $8 \times 4 = 32$ co-ordination and same together with 13 edges setup of the cube with an four space will make value $32+13 = 45$.
 64. It would be a blissful to take note that $45 = 1 + 2 + 3 + 4 + 5 + 6 + 7 + 8 + 9$.
 65. It would be a blissful to take note that *MANSARA* scripture of Sathapatya up-Ved enlighten that there are 13 internal Devas and 32 external Devas.
 66. It would be a blissful to take note $9 = 3^2$.
 67. And $8 = 2^3$.
 68. One shall sit comfortably and permit the transcending mind to glimpse and imbibe above features of dynamic state existence within 3-space which result into transition and transformation by transcendence at the origin into 4-space.

69. It is this feature which bring us face to face with the format feature, values and virtues of Triloki (3 spaces simultaneously manifesting within 3-space domain.
70. This 3 fold manifestation is as of interval, square and cube as of sequential steps of single double and the all the three dimensions coming into play.
71. Here it would be a blissful exercise the internal structure setup of cube accepts a three dimensional frame of 3 spatial dimensions which split 3 space into 8 octants and these octants stands coordinated as solid boundary of spatial order of 4 space.
72. The transition from a dimensional frame of linear dimensional to a dimensional frame of spatial dimensions, bring to focus the mathematics of bridging the gaps of transition from linear order setup to spatial order setup.
73. One may have a pause here and take note that linear dimensions synthesized and lead to dimensional synthesis values sequence being:
(... -21, -15, -10, -6, -3, -1, 0, 1, 3, 6, 10, 15, 21 ...).
74. Spatial dimensions synthesis value sequence comes to be:
(... -12, -10, -8, -6, -4, -2, 0, 2, 4, 6, 8, 10, 12 ...).
75. It would be a blissful to revisit above pair of synthesis value sequences of linear order dimensions and of spatial order dimensions and to glimpse and imbibe the transition gaps values and reach at the way these gaps stand bridged.



**TRANSITION GAPS VALUES SEQUENCES OF
LINEAR ORDER AND SPATIAL ORDER
SYNTHESIS VALUES**

21. Linear order dimensions synthesis values sequence (sequence -1) is as:
(... -21, -15, -10, -6, -3, -1, 0, 1, 3, 6, 10, 15, 21 ...).

22. Spatial order dimensions synthesis value sequence (sequence 2) is as:
(... -12, -10, -8, -6, -4, -2, 0, 2, 4, 6, 8, 10, 12 ...).

23. One may have a pause here and take note that the difference of above sequence 1 (linear order dimensions synthesis values) and sequence 2 (of spatial order dimensions synthesis values comes to be as under):

Sequence 2 – Sequence 1:

(... 9, 5, 2, [0, -1, -1, 0, 1, 1, 0,] -2, -5, -9 ...).

24. The above differences value sequence (sequence 3) is designated as zero stage differences values sequences.

25. **First stage difference values sequence (sequence four):**

Sequence four is the sequence of sequential differences of the values of sequence 3.

Sequence four:

Sequence four comes to be as under:
(... -6, -5, -4, -3, -2, -1, 0, 1, 1, 0, -1, -2, -3, -4, -5, -6 ...).

Second stage value differences sequences (sequence five):

The sequence of value differences of sequential of sequence four is designated as sequential five.

Sequence five:

Sequence five is values as under:

(... 1, 1, 1, 1, 1, 1, 0, -1, -1, -1, -1, -1, -1, ...).

Third stage value difference sequence (sequence 6):

Sequence six is the sequence of differences values of constitutive values of sequence 5.

Sequence six:

sequence six is of values as under:

(... 0, 0, 0, [0, -1, -1, 0,] 0, 0, 0 ...).

Fourth stage value difference sequence (sequence 7):

Sequence 7 is the sequence of difference of constitutive value of sequence 6.

Sequence seven:

Sequence 7 is of value as follow:

(... 0, 0, 0, [0, -1, 0, 1, 0,] 0, 0, 0 ...).

26. One may have a pause here and take note that the chain of sequence of differences of constitutive values of given sequence leads to another sequence.
27. In this series /chain of sequence of difference of values, from sequence 6 onwards, the central values form a group and another side the central group of values, theirs remain is equal values.
28. It is this feature which deserved to be comprehended well.
29. One may have a pause here and take note that the central group of values constitutes a range of object image setup as if the centre of the central group of

values is the placement of a mirror and first of the range is the reflection image of the second of the range.

30. One shall sit comfortably and permit the transcending mind to glimpse and imbibe format feature and value of this phenomenon.



3

LINEAR ORDER AND ITS NEGATIVE LINEAR ORDER

55. 3-space mathematics is a mathematic of linear order.
56. 3-space domain accepts linear measure.
57. Measure go parallel to sequential progression of dimensions formats.
58. Domain within dimensional frame gets framed and permits coverage for its each constitutes in terms of the measure of its dimensions.
59. In the context of 3-space, the 3-space domain as fixation for its constitution in term of its dimensional measures available for all the dimensions.
60. Dimensional frame of 3-space being a setup of 3 dimensions as such there would be an availability of a linear measure for sequential progression chase along each dimensions. This availability of a measure with a working rule Ganita Sutra 1: 'one more than before, will help us exhausted coverage for the entries domain of a linear dimension.

61. One may have a pause here and take note that proportionality summity rule of Ganita Upsutra 1 will help have a chase of dimensional frame of other order as well.
62. One may have further have a paused here and take note that dimensional order itself is a one space domain in the role of dimensions of 3-space domain, as such one space as well having simultaneously play for its own dimensional order, which is a negative linear dimensional order, as and the same dimensions of dimensions of 3-space.
63. One may have further have a paused here and take note that the synthesis of linear dimensions is their because of the availability of dimensions of dimensions.
64. This sustain-ness of dimension of dimensions that way takes values is equal to value of dimensions to dimensions from the individual values a pair of dimensions getting synthesized.
65. One may have a pause here and take note that linear dimension is of value '1'.
66. Pair of linear dimensions yield value ' $1+1 = 2$ '.
67. Out of this value, the value of dimension of dimensions is to be accounted for.
68. The value of dimension is dimension '-1'.
69. As such after accounting for '-1' out of value of pair of dimensional '2' there would emerged synthesized value after accounting for a value of dimensional of dimensional as ' $[(2)-(-1)] = 3$ '.
70. One shall sit comfortably and permit the transcending mind to glimpse and imbibe this synthesis values mathematics.
71. One shall fully comprehend and to completely appreciate the synthesis values mathematics of a pair of dimensions

to acquire proper insight and to attain appropriate enlightenment.

72. A step head, a synthesis of triple dimensions will required that third dimension on its synthesis is to account for value equal to dimension of dimensions firstly for the synthesis of third dimensions, with the first dimension and secondly for the synthesis of third dimensions with the second dimensions.
73. One may have further have a paused here and take note that in respect of third dimension there would be accommodated of value twice of the value of dimensions of dimensions. As such the dimensional synthesis mathematics, at the stage would be following working steps:-
- Step 1** value of synthesis pair of linear dimensions = 3.
- Step 2** value of third dimensions = 1.
- Step 3** value of a pair of dimension of dimensions = -2.
- Step 4** dimensional synthesis values for triple dimensions
 $= 3+1-(-2) = 6$.
74. One may have a pause here and take note that, it is this feature of linear dimensions synthesis values sequence (1, 3, and 6) for single, double and triple dimensions which deserve to be comprehended well.
75. One may have a pause here and take note that it brings us face to face with organization of (1, 3, and 6) as (1, 1+2, 1+2+3).
76. It is sequential summation for values triple (1, 2, 3) which deserves to be comprehended well.
77. One may have a paused here and take note that values triple (1, 2, and 3) is unique as that none of theses accepts perfectos other than 1.

78. Further as that, the value triple (1, 2, 3) accepts organization as (1, 1+1, 1+1+1).
79. It further goes parallel to availability of single dimensional a pair of dimensional and all the triple dimensional of a three dimensional frame.
80. It would be blissful to sequential chase:
- xxiii. (0, 0, 0).
 - xxiv. (1, 1, 1)
 - xxv. (1, 1+1, 1+1+1)
 - xxvi. (1, 2, 3)
 - xxvii. (1, 1+2, 1+2+3)
 - xxviii. (1, 3, 6)
 - xxix. (2-1, 2+1, 2-1+2-0+2+1)
 - xxx. (2, 2, 2)
 - xxxi. (2, 4, 6)
 - xxxii. (2, 6, 10)
 - xxxiii. (1+1, 3+3, 5+5)
81. One shall sit comfortably and permit the transcending mind to glimpse and imbibe above format feature values and to acquire insight and enlightenment about the sequential linear order progression steps measure with the help of Ganita Sutra 1 and Ganita Upsutra 1.



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TEACHER MANUAL CLASS IX

SECTION-2

1

VEDIC MATHEMATICS LEARNING STEPS

1. Vedic Mathematics learning with Ganita sutras values is to be parallel to the organization of Ganita sutra themselves. To learn Vedic Mathematics parallel to organization of Ganita sutras, as such is the first values which shall be imbibed well.
2. This learning step may be taken as the basic learning foundation steps.
3. The begging of learning of this foundation is to be initiation values as that organization sequence is to be accepted as sacrosanct. Accepting this sacrosanct value, that way, becomes the second learning step of Vedic Mathematics.
4. To maintain the sanitary of sequential organization of Ganita sutras values would mean to approach these

values by beginning with the first Ganita sutras and sequentially reaching at last Ganita sutras. This way, this chase beginning with first Ganita sutras and same to be continuing the sequential order Ganita sutras himself, becomes the third learning step.

5. The chase of value of first Ganita sutras is to begin it very first letter and there from , there is to be sequential reach of optical the last letter of Ganita sutra and thereafter chased is to have a fresh begging with the first letter of second Ganita sutra.
6. This makes this as the fourth learning step
7. These quadruple steps bring values of first letter of first Ganita sutra at the center of initiation focus. With this focus, the formal chase of values of mathematical domain of Ganita sutras begins.
8. Begging like that makes values focus upon first letter of Ganita sutras as the fifth learning step.
9. One may have a pause here and take note that these five learning steps bring us face to face with the value domain and format of first letter (of first Ganita sutra)
10. The values domain and format of this first letter (6 vowel make it of the feature and order of sixth vowel. The Vedic Mathematical domain chase in section with values and format of sixth vowel settle the sixth learning step.
11. Sixth vowel values domain and format is of the feature and order of sixth dimensional space with in creative dimensional frame of sixth dimensions reach at sixth space with in creative dimensional frame of sixth dimensions sets the processing systems for its reach from first letter to second letter (of Ganita sutra one) this the seventh learning step

12. One may have a pause here and take note that the seventh step as it is , of processing system takeoff from mathematical domain of first letter of Ganita sutra , the same , firstly leads for a reach to mathematical domain of second letter of Ganita sutra one .
13. Secondly, same also leads for a reach for Ganita sutra one.
14. Thirdly, it also leads for reach for Ganita sutra 2.
15. One may have a paused here and to comprehend and imbibe this three folds reach of the seventh step. This comprehension and imbibing, it itself makes the eight learning step. The eight learning step, that way becomes a three folds value:
 - (I) Firstly, A reach from first letter to second letter of Ganita sutras.
 - (II) Secondly, a reach from Ganita sutra from 1 from Ganita sutras 1.
 - (III) Thirdly, a reach from Ganita sutra 1 to Ganita sutra 2.
16. Mathematical domain of second letter of Ganita sutra 1 is of values and format of first Vargas consonant. Comprehended imbibing the value and format the first Vargas consonant and creator the space (4 space), in unified state of value 4 as 1, becomes the ninth learning step
17. The format of first Vargas consonant of 2 fold feature:
 - (I) Firstly as that it is Vargas consonant, so of a square format and,
 - (II) Secondly as that it is of dimensional role.
18. One shall sit comfortable and permit the transcendence mind to glimpse and imbibe these features.

19. This glimpse and imbibing of this features makes the tenth learning step.
20. One may further have a pause here and take note that this transition, reach and transformation from the mathematical domain of Ganita sutras 1 to mathematical domain of 2 letter of Ganita sutra 1 takes us from mathematical domain of 6-space to mathematical domain of 4-space.
21. Comprehension of this transition reach and transformation from 6-space to 4-space and their relationship internship as their 4-space as dimensions of 6-space get as the eleventh learning step.
22. One may have a paused here and take note that the Lord Vishnu is over Lord of 6-space and Lord Brahma is over lord of 4-space.
23. Further as that, the Lord Vishnu is also the presiding deity of Sathapatya measuring rod, while Lord Brahma is presiding deity of measure the measuring rod.
24. This parallel range of values domains quagination of first and second letter of Ganita sutra 1, the one head, and of Sathapatya measuring rod and its measuring of other hand becomes the basic feature of processing system of Vedic Mathematics.
25. Learning about this relationship becomes the twelfth learning step. This further brings us to face to face with the co-ordination of mathematical domain of Ganita Up sutras 1 and Ganita up sutra 2, and of Ganita sutra 1 and Ganita sutra 2 learning this relationship makes thirteen learning step. The process of reach from first letter to second letter of Ganita sutra 1 on its continuity from letter 2 from letter 3 is the aspect , whose learning will bring us face to face with feature of reach from 6-space as domain as to 4 space as dimensions. This reach as

- such, is going to be a reach from domain (2 dimensions); a step head is going to be reach of parallel format as from dimensions (2) 'dimensions of dimension'. This is going to be 14th learning step with this give an attainment reach from letter 2 to letter 3 of Ganita sutra 1.
26. Further there would be parallel reach from Ganita sutra 2 to Ganita up sutra 2.
 27. Still further there also reach Ganita sutras 1 to Ganita up sutra 2
 28. Still further there reach from Ganita sutras 2 to Ganita sutra 3.
 29. This fifteen learning step comes to be fourth expect:
 - (I) Firstly, a reach from 2 letter from 3 letter of Ganita sutras 1.
 - (II) Secondly from second Ganita sutra to second Ganita up sutra.
 - (III) Thirdly from first Ganita sutras to secondly Ganita up sutra.
 - (IV) Fourthly from second Ganita sutra to 3 Ganita up sutra.
 30. One may have a pause here and take note that the phase and step of processing would also reach from second Ganita sutras to 1 Ganita sutra as well.
 31. This aspect of reach of this phase in stage as the Ganita as the sixteen learning step.
 32. One may have a pause here and take note that this set of 16th learning steps will give us insight and enlightenment about the organization format of Ganita sutra and also about the feature of processing system of Vedic Mathematics of Ganita sutras.

33. One shall sit comfortably and to visit and re-visit above features and to comprehend and imbibed the same fully to acquire proper insight and appropriate enlightenment about the organization and progression system of mathematically domain of Ganita sutras.

2

CONCEPTUAL FORMULATION

1. Orthodox and classical words of English language being availed here accept number value formats. These values formats will help have insight about these words as mathematical formulations. Number value format of each letter of English alphabet (Roman script) is there as per the placement of the letter in the string beginning with first letter (A) and reaching up till last letter (Z) this string is of 26 step setup.
2. These 26 steps accept values (1 to 26) respectively parallel to it or associated values (1 to 26) to letter (A to Z) as per their sequence and order from (A to Z).
3. These values associated with individual letter and designated as their respective number value format(NVFs)
4. Precisely $NVF(A) = 1, NVF(B) = 2, NVF(C) = 3 \dots, NVF(X) = 24, NVF(Y) = 25, NVF(Z) = 26$.
5. NVF of word availing these letter is equal to sum of these availing individual letter
6. Illustratally $NVF(\text{word}) = (23+15+18+4) = 60 = (NVF=4), (NVF \text{ order})$.
7. It would be blissful exercise to glimpse and imbibe the values and features of the following continual form with the help of their respective and NVF:

S. no.	Word	NVF	Other Word	Other Word

1.	A	1	-	-
2.	B	2	Aa	--
3.	C	3	Ab	Ba
4.	D	4	Aab	Bb
5.	E	5	Aac	Bc
6.	F	6	Abc	Aabb
7.	G	7	Be	Cd
8.	H	8	Ce	dd
9.	I	9	De	Ed
10.	J	10	Bag	ee
11.	K	11	Ja	Ib
12.	L	12		
13.	Order	60		
14.	Format	73		
15.	Feature	76		
16.	Value	61		
17.	Virtue	85		
18.	Glimpse	80		
19.	Imbibe	40		

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20.	Appreciate	94		
21.	Insight	105		
22.	Enlightenment	141		
23.	Full	51		
24.	Complete	89		
25.	Appropriate	126		
26.	Proper	88		
27.	Mathematics	112		
28.	Domain	56		
29.	Transcendental	150		
30.	Dimension	102		
31.	Boundary	100		
32.	Origin	72		
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VEDIC ARITHMATIC

1. Vedic arithmetic is domain of arithmetic value and there processing systems of Ganita sutra (and upsutra).
2. Ganita sutras (and upsutras) are accepting Ganita sutra 1 being the source sutra and Ganita upsutra 1 being the source Ganita upsutra.
3. The sequential arrangement feature of Ganita sutra 1 and proportionality symmetry rule of Ganita upsutra 1 are the basic features of arrangement of organization format of mathematical domain of Arithmetic.
4. To have comprehensive view of organization of mathematical domain of Vedic arithmetic, one shall sequentially glimpse parallel to the sequential organization format of Ganita sutra (and upsutra) themselves.
5. The reach from Ganita sutra 1 to Ganita upsutra 2 and simultaneously reach from Ganita upsutra 1 to Ganita upsutra 2 and the further inter relationship of reach of Ganita sutra 1, Ganita upsutra 1, Ganita sutra 2, and of Ganita upsutra 2, provides us insight about the Vedic Mathematical system reach at value domain of arithmetic, as well as the way values of arithmetic help reach back at mathematical system and mathematical domain of Ganita sutras and upsutras themselves.
6. The reverse chase from value domain of arithmetic to Ganita sutra domain will help us appreciate that the whole range of values of domain of arithmetic, ultimately, gets centered around number value '1' and sequentially it unfolds up till number value 5, and then further.

7. The values domain of arithmetic, though is of sequential order of infinite sequence of infinite sequences but the same is formatted along whole numbers line, and same is worked as sequential strings of different units ranges, formatted along the whole number line which further formats surface.
8. This reach becomes the reach of algebraic format for arithmetic, geometric formats for algebra, manifestation formats for geometry and also of transcendental format for manifestations.
9. This chain even gets extended infinitely as value of the system of number value domain of arithmetic which further goes parallel to domains/framed as dimensional domain, permitting transcendence from domains at their origin and their by, there being a reach of base of origin and a step head to format of a base and still further having a reach at state of format itself.
10. This even gets transcendence further to natural sources of values lively within the Brahman reservoir of virtues, fulfilled with self-referral system of making existence phenomenon being blissful.
11. The pre-requisite for initiation of Vedic mathematical domain of arithmetic of number values are just two, first being 'counting' and second being the sitting of count along a line.
12. This pair of **pre-requisite** as well, gets restricted up till count 1 to 5.
13. Counting up till 5 and reach their form as a reach of 5×1 to 5×5 , become the basic pre requested of learning of Vedic arithmetic.
14. With this pre-requisite of 5×5 , rest entire superstructure theirs upon Vedic arithmetic become a mental exercise.

15. The initial pre-requisite value as an up till 5×5 , as well is mental exercise.
16. As such Vedic mathematical domain of arithmetic is a mental mathematics domain.
17. In fact, the whole range of Vedic Mathematics is mental mathematics reach system.
18. Within mind is created intelligence field
19. Mind itself is value of brain.
20. Brain is a feature organ within head.
21. Head is a conjugative organ of human body sustained by human frame.
22. Therefore, the initiation learning, as well is teaching of Vedic Mathematics in general, and Vedic arithmetic, in particular is to avail human body sustained by human frame of which intimate presence is naturally available for the mind (of the Sadhakas as well as for the guru /for disciple as well as the master / for students as well as for teacher of Vedic Mathematics).
23. The pair of Vedic mathematical entities namely count and counting line, as well become just a mental construct pair.
24. With this, foundational comprehension, the chase a waiting for enlightenment of Vedic Mathematical domain of arithmetic is going to be a blissful lively experience of being face to face with the virtues of values of our existence phenomenon with our solar universe.
25. It would blissful to take note that value sequence (1, 2, 3, 4, 5, 6, 7, 8, 9, 10 ...), values wise is parallel to values sequence (1×1 , 1×2 , 1×3 , 1×4 , 1×5 , 1×6 , 1×7 , 1×8 , 1×9 , 1×10 ...).
26. One may have a pause here and take note that though both above values sequences have same value at each

- step but, otherwise as it **evident**, both the sequences are fundamentally different at their organization formats as much as that the first sequence permits plotting along a line while the second sequence may avail for its plotting along a surface (having length and breadth).
27. Therefore to appreciate the arithmetic of first sequence and of second sequence, 1 is also to keep in mind there plotting format as well, which in 1st case of linear feature, while the 2nd is of spatial feature.
 28. Further, the second sequence may have arrangement format for itself as plotting of value along first axis, as well as along second axis.
 29. This shall be leading us to diagonal plotting as of value sequence: [(1, 1), (2, 2), (3, 3)...].
 30. Here the pairing (1, 1), (2, 2), (3, 3) and so on may lead to different sequential strings like (1+1, 2+2, 3+3), (1x1, 2x2, 3x3) and so on .
 31. Of these the value sequence (1², 2², 3²) will make diagonal on which these values plotted, being of a spatial spread format.
 32. A reach in terms of pair (N-2) and (N²-2), along line (axis) and along diagonal (of spatial format) will lead us to different attainment.
 33. The coordination (N²-2) = [(N+N-2) + (N x N-2)] will help us see the interrelationship of pair of attainment.
 34. Like that Vedic arithmetic works out and attains different attainments.
N = 5 leads us to (5²-2) = (3+5+3x5).
 35. This value equation goes parallel to dynamic state of framed transcendental domain creating a spatial order for its linear order for its dimension of dimensions.
 36. This reach is of chase of arithmetic of algebraic format and ahead algebraic format itself availing geometric

format. This will lead to artifices of numbers running parallel to dimensional frame.

37. It is this reach at dimensions of dimension level (a casual state) of our existence phenomenon which deserve to be glimpse and imbibed as insight of Vedic systems.

ARITHMETIC ON ALGEBRAIC FORMAT

1. Ganita sutra 1 provides working rule 'one more than before'.
2. This working rule help set counts along a line.
3. This line would be as long as are number of count set upon it.
4. This counts lines is of infinite length feature as there are infinite counts.
5. Ganita upsutra 1 provides working rule of 'proportionate'.
6. This rule arguments working rule of Ganita sutra 1.
7. Ganita sutra 1 and Ganita upsutra 1 together lead to a working rule of units of different values inter-related with each other.
8. Illustratively unit of value 1 and unit of value 2 are 'proportionate in reference to each other'.
9. The values range with unit as value 1, gives rise to counts sequence of values (1, 2, 3, 4, 5, 6 ...) and unit count as of value 2 will give rise to count value sequence (2, 4, 6, 8, 10 ...).
10. Like that unit as value n shall be leading to unit values sequence of counts as ($N, 2N, 3N, 4N \dots$).
11. These all counts sequences are of infinite lines setups.
12. Ganita sutra 2 gives us a working rule 'all from 9 and last from 10', and the same settles ten place value system which avails 9 numerals and 10 as place value. The infinite unit length, as such gets organized as, of 10 counts folds.
13. Here though the folds are going to be infinite in number but each fold remain of 10 count range.

14. The rule of symmetry of Ganita upsutra 1 brings in placement value system for each count like count 10.
15. There is going to be a relationship between folds lengths of every pair of place value system.
16. The fold being of unequal length, and as such the portion of length of larger fold from that of the length of smaller fold, as such, is taken care of by the working rule of Ganita upsutra 2 specific designation for the above difference as 'REMAINDER'. Precisely 'that remain is Remainder', is the working value of the rule of Ganita upsutra 1.
17. Vedic arithmetic simultaneously avails, as a general rule, of 10 placement and 5 place value system.
18. The reach $10 = 5+5$ and reach for count five as of five steps (1, 2, 3, 4, 5) and reach of 10 as well, as of five steps (2, 4, 6, 8, 10), that way focuses upon simultaneously working with a pair of place value system, here being ten value system and 5 place value system.
19. Geometric format for algebra takes us to the format of hypercube 5 whose domain boundary ratio is $a^5:10b^4$.
20. The creative boundary of hypercube 5 is of 10 components and the same makes a format for 10 place value system.
21. Domain fold of hypercube 5 is a manifested domain of 5-space content and same make a 5 place value format.
22. The value 10 with its organization as $10 = 4+6$, leads to 4×6 grid format which accommodate all the 24 double digit numbers of 5 placed value system.
23. These features deserves to comprehended well to have insight of Vedic arithmetic processing system of simultaneously chase in terms of ten place value system and 5 placed value system along the format of hypercube 5.

24. One may have a pause here and glimpse number value (5), 5 placed value system and 5 space domain.
25. One shall further glimpse number value 10, 4-space boundary of 10 components of 5-space and 10 place value system.
26. One shall further simultaneously glimpse number value 5 and number value 10, 5-space domain and its boundary, and 5 place value and 10 place value system.
27. The general algebraic format, parallel to place value format for number value comes to be , as follow:
($A+Bx^1+Cx^2+Dx^3+Ex^4+Fx^5 \dots$).
28. The value of x is equal to place value of the system.
29. For ten place value system $X = 10$.
30. For five place value system $X = 5$.
31. Therefore the conversion from ten place system to five value system and vice versa would be reach at, in terms of place value of the respective system.
32. Here in case of ten place value system and five value system, inter-relationship of place value is of feature (10:5).
33. It is like 2 as 1 and 1 as 2 features.
34. This feature is too availed to reach from one place value system to another place value system.
35. It would be blissful to visit and revisit algebraic format approach for place value organization of number value.
36. Vedic system approach number values arithmetic along algebraic format parallel to concerned place value system.
37. As number value can be organized along every place value system, as such parallel algebraic format are available for every number value.
38. It is this feature which makes simultaneously availability of many approaches for values of numbers.

39. It is this richness of Vedic Arithmetic systems, which deserve to be comprehended well and same is to be imbibed fully.
40. This will help firstly to have smooth transition from arithmetic to algebraic and back to algebraic to arithmetic, and a step head from arithmetic to algebraic to geometric and back from geometric to algebraic to arithmetic.
41. Still further reach can be up till manifestation, transcendence and even beyond parallel to and in terms of values of numbers.
42. As such the chase of Vedic arithmetic is of very large domain, parallel to the domain of Vedic Mathematics itself.

5

NUMBER VALUE 5 AS NUMERAL

1. Ten place values system has range of nine numerals.
2. Numeral five is of middle placement of nine numerals range (1, 2, 3, 4, 5, 6, 7, 8, 9).
3. Six space has five numeral range (1, 2, 3, 4, 5), with numeral 3 at its middle placement.
4. Four place values system has 3 numeral ranges (1, 2, 3,) with numeral 2 at its middle placement.
5. Values triple (9, 6, 4,) is unique values triple as that it accept reorganization as (3^2 , 3×2 , 2^2).
6. Further as that $9 = (6 \times 3 / 2)$ and $6 = (4 \times 3 / 2)$.
7. Still further as that, the square is structural setup of 9 components.
8. Synthesis of two squares is of value (9+6).
9. Synthesis of second row of two squares is of value (6+4).

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FIRST YEAR
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BOOK-2**

3-SPACE MATHEMATICS VALUES

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7. Prime aim
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**3-SPACE VEDIC MATHEMATICS VALUES
LESSON 1
GANITA SUTRA 1 AND 9 NUMERALS**

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**VEDIC MATHEMATICS COURSE
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**3-SPACE VEDIC MATHEMATICS, SCIENCE &
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2. Introductory

**3-SPACE VEDIC MATHEMATICS, SCIENCE &
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2. Sealed 3-Space Domain

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(5, 6, 7, 8, 9 ...)

VEDIC MATHEMATICS COURSE

FIRST YEAR

CLASS IX

BOOK-2

3-SPACE MATHEMATICS VALUES

ABOUT THIS BOOK

9. Vedic Mathematics course is of 4 year duration of high and higher secondary classes.
10. First year course is ment for class IX. It is of 3 steps being covered as book 1, book 2 and book 3 of 3-space bases base mathematics.
11. Book 1 covers 3-space reality. it is essentially about cube format.
12. Present book 2 is about 3-space mathematics value and book 3 is going to be about 3-space mathematics, science and technology.

BOOK-2: 3-SPACE VEDIC MATHEMATICS VALUE

1. Here in this book the mathematics of 3-space reality is being chased in terms of Ganita Sutras 1 to 4 and Ganita Upsutras.
2. As 3-space is linear order space, as such, its restrictions are being kept in mind throughout the chased about this book.
3. Being Conventional classification of mathematical learning as arithmetic, algebra, geometry, calculus, as such, is indicated, the extend edges is possible, in the context of Ganita Sutras and upsutras working rules and their processing steps.
4. Further, the existent syllabus of NCERT is also, is being attempted to be kept in mind.

PRIME AIM

1. Prime Aim of this course is to mature Young Minds as mathematical minds to be capable for properly glimpsing appropriately imbibing the bases base mathematics of Vedic knowledge, so that, Vedic knowledge systems stand gently appreciated for availing their value.
2. Sadhakas of this course may aim to acquire insight approach Sakhala Rig Ved Samhita and other Samhita for their mathematical values.

VEDIC MATHEMATICS TEACHER ROLE

1. Basic Role in this Course is to be played by Vedic Mathematics teachers.
2. Young Minds are innocence fulfilled with and are in an affine state, and they can be mature as mathematical minds only by the solemn role to be play by Vedic Mathematics teacher.



3-SPACE VEDIC MATHEMATICS VALUES

LESSON 1

GANITA SUTRA 1 AND 9 NUMERALS

GENERAL

1. Ganita Sutra 1 *Eka Adbhikena, Purvena* (one more than before), sequentially leads us to numbers values range (1, 2, 3, 4 ...).
2. Ganita Sutra 2 (all from 9 and last from 10) well focus upon the number value range (1, 2, 3, 4, 5, 6, 7, 8, 9), and thereafter, in terms of it the other values of range (10, 11, 12, 13, 14 ...) are to be worked out.
3. We are up-till the stage of middle classes learning, are well in-quantive with role of numbers range (1, 2, 3, 4, 5, 6, 7, 8, 9) as nine numerals of ten place value system.

DISTINCTIVENESS OF EACH NUMERAL

1. Let us revisit numbers values (1, 2, 3, 4, 5, 6, 7, 8, 9).
2. It would be a blissful to appreciate as that:
 - i. Number value 1 is unique being the first numeral.
 - ii. Number value 2 makes numeral being unique 'is the first prime. Infect '2 is the only even prime'.
 - iii. Number value 3 makes numeral '3' being unique as it is the first odd prime.
 - iv. Number value 4 makes numeral '4' unique being the first composite numeral. More over number value 4 as the unique organization feature as that

$$4 = 2+2 = 2 \times 2 = (-2) \times (-2)$$

- v. Number value 5 makes numeral 5 being unique as it is of middle placement of 9 numeral ranges (1, 2, 3, 4, 5, 6, 7, 8, 9).
- vi. Number value 6 makes numeral 6 being unique as '6' is the first perfect number. Further as that, $6 = (1+2+3) = (1 \times 2 \times 3) = (2 \times 3) = (-2) \times (-3)$.
- vii. Number value 7 makes numeral 7 being unique as '7' is the biggest prime numeral.
- viii. Number value 8 is unique as it accepts organization as $(8 = 2^3)$, the cube of the first (and the only even) prime.
- ix. Number value 9 makes numeral 9 being unique being the biggest numeral.

VINCULUM SYSTEM

1. Ganita Sutra 2 (all from 9 and last from 10) leads to vinculum system, a system of approaching in numeral (in general, number) in reference to base value, in-terms of deficiency of the numeral from the base.
2. Illustratively $(1 = 10-9)$, $(2 = 10-8)$, $(3 = 10-7)$, $(4 = 10-6)$, $(5 = 10-5)$, $(6 = 10-4)$, $((7 = 10-3)$, $(8 = 10-2)$, $(9 = 10-1)$. This, helps pairs (1, -9), (2, -8), (3, -7), (4, -6), (5, -5), (6, -4), (7, -3), (8, -2), (9, -1).
3. Of these, quadruples pairs $(6 = 10-4)$, $((7 = 10-3)$, $(8 = 10-2)$, $(9 = 10-1)$ help bigger numerals (6, 7, 8, 9) to get associated with negative values of quadruple (4, 3, 2, 1).
4. This reach helps approach nine numeral range (1, 2, 3, 4, 5, 6, 7, 8, 9) in terms of values range (1, 2, 3, 4, 5, -4, -3, -2, -1).

5. Newly reached range of values (1, 2, 3, 4, 5, -4, -3, -2, -1) is of values, in-terms of which the original values range (1, 2, 3, 4, 5, 6, 7, 8, 9) can be easily worked out with much advantageous steps.
6. This range of values (1, 2, 3, 4, 5, -4, -3, -2, -1) may be designated as vinculum format 9 numerals range.
7. This vinculum format numerals range replaces the original numerals range (1, 2, 3, 4, 5, 6, 7, 8, 9) for arithmetic operations.

VINCULUM FORMAT NUMERALS

1. Value wise equivalence with numerals range (1, 2, 3, 4, 5, 6, 7, 8, 9) leads to [1, 2, 3, 4, 5, (10-4), (10-3), (10-2), (10-1)].
2. For convenient handling negative values (-4, -3, -2, -1) are symbolically taken as (4, 3, 2, 1 with bar).

VEDIC MATHEMATICS COURSE

FIRST YEAR

CLASS IX

BOOK-3

**3-SPACE VEDIC MATHEMATICS, SCIENCE &
TECHNOLOGY**

INTRODUCTORY

1. 3-space reality (book-1), 3-space mathematics values (book-2) and 3-space Vedic Mathematics, Science & Technology (book-3) are ment for covering first year course of Vedic Mathematics.
2. 3-space reality brings us face to face with 3-space content (the space content within a 3 dimensional frame of 3 linear dimensions).
3. 3-space content manifests as domain fold of hyper cube 3 (cube). The linear dimensional order leads to linear measure (linear unit) mathematics.
4. Manifested body of 3-space are the set ups of 3 space content lumps enveloped within a spatial boundary (2-space) content manifesting as boundary fold of hyper cube 3.
5. Values of framed domain within spatial boundary are the subject matter of sciences and technology of 3-space, and the same along with their bases base mathematics

- makes the Discipline of 3-space Vedic Mathematics, Science & Technology.
6. 3-space domain remains integrated in terms of its dimensional frame of 3 linear dimensions.
 7. During this integrated state, the origin of dimensional frame remains superimposed upon the seat of origin fold within the domain fold.
 8. During this state of origin of dimensional frame remaining superimposed upon the seat of domain fold, the domain fold along with its enveloping boundary, acquires the status of a **sealed framed domain**.
 9. Within sealed framed domain, a transcendence takes place which takes from domain to dimensions, and further from dimension to dimension.
 10. However, with removal of the seal at the seat of the origin fold within domain fold, transcendence further takes place through the origin fold and same takes to the base fold.
 11. The transcendence within sealed domain fold is of diminishing dimensional order format, while the transcendence within unsealed state of domain fold, is of enhance dimensional order as origin fold is of higher dimensional order than that of domain fold, and the base fold is of higher dimensional order than that of the origin fold.
 12. During present phase of this year course (of book-3), we shall be learning about the values making discipline of 3-space Vedic Mathematics, Science & Technology.



3-SPACE VEDIC MATHEMATICS, SCIENCE & TECHNOLOGY

LESSON 1

SEALED 3-SPACE DOMAIN

1. Let us have a fresh visit to the set up of a cube.
2. Cube has an enveloping boundary of 6 surface plates stitched in terms of 12 edges and 8 corner points.
3. The volume within enveloping boundary of cube makes a domain fold of cube as hyper cube 3.
4. The domain fold (volume) of cube is an integrated whole as its centre is in a sealed state and it makes the whole set up as a sealed 3-space domain within enveloping boundary.
5. One may have a pause here and take note that this set up (of a sealed 3-space domain) accepts a split into 8 sub cubes parallel to the split of format 3-space into 8 octants because of the split for 3 dimensional frame itself and their by the centre of the cube acquiring unsealed state.
6. One may further have a pause here and take note that in this unsealed state, 4-space comes into play and the 3-space domain resiles to the role of the solid boundary of 8 components of hyper cube 4.
7. It is this transition and transformation for the role of 3-space content from that of a domain fold to that of a boundary fold, which deserves to be comprehended well for its complete appreciation to acquire proper insight and appropriate enlightenment about the feature and values of 3-space content and different roles to be played by 3-space format.

8. Like that, 3-space content manifesting as domain fold shall be leading to different roles which to include the role as a solid dimension of 5-space, solid boundary of 4-space, solid domain within a domain, solid origin of 2-space and solid base for 1-space.
9. A step-head, 3-space would be playing a role of format for (0-space) and unity state reach for (-1 space).
10. Even a step-head, 3-space shall be playing a role of natural source for (-2 space), and a Brahman reservoir value for (-3 space). These different roles together with different versions of cube shall be and reaching 3-space mathematics, science and technology.
11. A step-head, 3-space domain split spectrum shall be further and reaching discipline of 3-space Vedic Mathematics, Science & Technology.
12. Transcendence with-in 3-space and split of a cube into 8 sub cubes and a head 64 sub-sub cubes will further and reach 3-space Vedic Mathematics, Science & Technology.
13. The interrelationship of 3-space in its different role with another spaces playing their respective roles will add further reach-ness to the value of the discipline of 3-space Vedic Mathematics, Science & Technology.
14. This range of values of discipline of 3-space Vedic Mathematics, Science & Technology being centered around the set up of a 3-space domain, as such, bring to focus the status of a sealed 3-space domain vis-à-vis the state of unsealed 3-space domain.
15. One shall sit comfortably and to permit the transcending mind to distinctively glimpse the set ups of sealed 3-space domain and unsealed 3-space domain.

16. Further one shall glimpse and imbibe the feature of 3-space contents manifesting a domain fold and playing it different roles.
17. One shall further glimpse and imbibe the features of relationship of roles of 3-space with the roles of the range of dimensional spaces 1 to 9.
18. In the context, the synthesis of linear dimensions will emerges as the range of values of sequential transition for the reach for the space within the dimensional frames of 1 to 9 linear dimensions. This linear order chase will make the bases base mathematics of 3-space mathematics, science and technology discipline.
19. This sequential progression of 9 steps shall be providing us inside for the reach of linear order as dimension, boundary, domain, origin, base, format, unity state, natural source and Brahman reservoir attainability of 3-space mathematics science and technology.
20. These attainment, also shall be bringing us face to face with the limitation of linear order reach which can be appreciated by having approach by spatial and higher order.
21. One shall ever remain conscious of potentialities and limitation of the dimensional order in terms of which the discipline of Vedic Mathematics, Science & Technology is being reach.
22. With this consciousness one shall approach the discipline of Vedic Mathematics, Science & Technology while availing linear dimensional order of 3-space.



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(5, 9, 14, 20, 27 ...)
(5, 6, 7, 8, 9 ...)

VEDIC MATHEMATICS OF GANITA SUTRAS

1

GANITA SUTRAS

1. Ganita Sutras are 16 in numbers and these are complemented and supplemented by 13 Ganita Upsutras.
2. The text of these 16 sutras and 13 upsturas avails just 519 letters in all.
3. The availability of sole syllable Om, as the source reservoir formulation makes the range of $(519+1) = 520$ letters/syllables.
4. Of these, 1 letter (of Ganita Upsutra 8) is in unmanifests state (as is the first vowel Akara) and further 8 letters of Ganita Sutra 6 (Anarupai) are in dormant state, and thereby make the manifesting lively range of being range of 512 letters.
5. One may have pause here and take note that $512 = 2^9$, becomes the organization feature of mathematical domain of Ganita Sutras and upsutras.
6. One may further have a pause here and to take note that of the range of values (01, 02, 03, 04, 05, 06, 07, 08, 09, 10), the choices for reach at value 10 comes to be precisely 2^9 .
7. This as such , bring us face to face with, as many as $2^9=512$ aspects of mathematical domain and the same, inherently leads to a range $(2^1, 2^2, 2^3, 2^4, 2^5, 2^6, 2^7, 2^8, 2^9) = 2^{10}$.
8. One may further have a pause here and to take note that, this way the internal organizational potentiality of organizational format of mathematical domain of Ganita Sutras and upsutras, inherently takes us from feature range 2^9 to 2^{10} .

9. And this permit as a system, of ad-infinitum steps.
10. In this background, the impression gathered by some, as if, mathematics of Ganita Sutras and upsutras, covers a very small portion of Vedic Mathematics, is just an ignorant inference in their part.
11. The mathematical domain of Ganita Sutra and upsutra is as big, as is our solar universe and the same is of the values and virtues of sustain-ness systems of our solar universe as well.
12. Going by the popular terminology, the mathematics of Ganita Sutra and upsutras approach arithmetic on algebraic format.
13. Algebraic is approach on geometric format.
14. Geometric is approach on manifestation format.
15. Manifestations are approach on transcendental base.
16. Transcendental base is approach on self-referral format.
17. Self-referral format is approach in unity state.
18. Unity state is approach in self sustained nature.
19. Self sustained nature is fountained by Brahman domain.
20. Brahman domain is inherently lively as self sustaining and self fountain Par-Braham source reservoir.
21. These 10 folds of Vedic Mathematical domain of Ganita Sutras at present is even beyond glimpse and imbibing potentiality of modern mathematical systems.
22. Vedic Mathematics is an ancient discipline of knowledge, for some historic reason, same had gone garment some centuries, 'the learning and teaching methodology' is to be adopted for its sequential reach parallel to melting process of the mental state of individuals.
23. Beginning is to be made, has been demonstrative by Swami Bharti Krishna Tirtha Maharaj Ji as that Ganita Sutras be approached the Vedic way of mediation.

24. The first step for reach at the mathematical domain as well is to be as is illustratively advocated and demonstrated by Swami Ji as that arithmetic be approached on algebraic format.
25. This takes us from sutra 1 to sutra 2 with help of complementary and supplementary values of Ganita Sutra 1, Ganita Upsutra 2 and Ganita Sutra 3, in particularly.
26. The illustrative demonstration given by Swami Ji and search work of Prof. K. R. Williams, in the finish form of his 'The Crowning Gem: 'One Vedic Master-Formula for Powers, Roots and Polynomial Equations, complete the reach of this format approach for arithmetic on algebraic'.
27. Sadhakas fulfilled with intensity of urge to learn and teach Vedic arithmetic of Ganita Sutra and upsutras shall glimpse and imbibe the values of following to most valuable works:
 - (I) Vedic Mathematics by Swami Bharti Krishna Ji Maharaj.
 - (II) The Crowning Gem by Prof. Kenneth Ronald Williams. ■

ALGEBRA ON GEOMETRIC FORMAT

CONTENTS

37. Artifices, powers and dimensions
38. Boundary fold as place value format

ALGEBRA ON GEOMETRIC FORMAT

1

ARTIFICES, POWERS AND DIMENSIONS

1. To glimpse unifine number, algebraic and geometric systems, one shall is face to face with (I) artifices of numbers (II) powers of polynomials and (III) dimensions of spaces.
2. Organization of values of numbers along place values formats, organization of polynomial as powers of its terms and sequential ranges of bodies within dimensional frame are the manifested feature of arithmetic, algebraic and geometry.
3. The unifine feature of artifice, power and dimension are at the base of unity of mathematical domain.
4. The concepts count '1', first power and single dimension are of values which have one-ness for their virtues.
5. Arithmetic on algebraic format, as a system, avail unifine gesture of place value system as an organization of powers.
6. This, that way becomes a two way processing system and same will help work out polynomials being place value numbers.
7. Unifine virtues values of power organization with organization within a dimensional frame, will facilitate performs on of algebraic expression along geometric format here as well, the emerging system is going to be a two way system and geometry as well will permits its chase along algebraic format.
8. Reach of geometry along algebraic format, as such it will give a reach for geometry to give parallel to numbers.

9. The manifestation format availability for geometry bodies will make geometry of the format of Sathapatya measuring rod as synthetic set up of hyper cubes.
10. With it, the boundary folds in particular will provide organization formats from place values systems organization for numbers values.
11. One shall sit comfortably and permit the transcending mind to glimpse and imbibe above affine features value and virtues of geometric, algebraic and numbers values format.

2

BOUNDARY FOLD AS PLACE VALUE FORMAT

12. The domain boundary ratio ($a^n:2n^{n-1}$) makes boundary ($2n:2b^{n-1}$) of features parallel to $(2n)$ place value format.
13. Illustrative $n = 5$ takes us to creative boundary (4-space boundary of transcendental domain (5-space domain) as of the feature of a ten place value format.
14. One may have a pause here and to take note that the creative boundary of 10 components is of a transcendental origin (5-space as origin).
15. The transcendental origin as a compactified range with 6-space as its own origin and same being of a creative dimensional order, the same ascendance through unity state base, and by having ascendance though self-referral origin firstly gets superimposed upon solid order domain and translate and reaches creative a boundary and the resultant superimposition of solid order upon spatial order, the same acceleration and every component of a creative boundary transit and transform into 10 components of transcendental

boundary and as a result their emerges a set up of $10 \times 10 = 100$ creative components.

16. And this, process continuous as of ad-infinitum steps.
17. One may have a pause here and to take note that this further bring us face to face with a Sathapatya measuring rod synthesized as hyper cubes 1 to 4, for a creative domain and parallel quadruple artifices being (1, 2, 3, 4) with summation value $(1+2+3+4) = 10$ as a manifestation value of hyper cube 3.
18. One may have a pause here and to take note that solid order (3-space) in the role of dimensional of 5-space and manifestation of 3-space content lump as domain fold of hypercube 3 together with the role of 3-space as boundary fold of 4-space, bring us face to face with phenomenon which deserves to be comprehended well and same to be imbibed fully, particularly as that half of the boundary nb^n gives sequential progression towards one orientation while the second half of the boundary (nb^n) gives rise to progression towards other orientation while the boundary placements sticking to the middle placement of the 2 fold progression for exhausted coverage of whole range of whole numbers (negative, zero and positive).
19. One may further have a pause here and to take note that working with half boundary is the feature which takes us further for the spot from the formatted values of Ganita Sutra 4, in particular.
20. Parallel to the organization of boundary of $2n$ components as (n, n) , would sequentially follow organization $(n-r, n+r)$, for $r = (1, 2, 3, 4 \dots, n)$.
21. Each organization has its distinct role to format for algebraic and arithmetic operations.

22. Illustrative $r = 1$ the organization $(n-r, n+r)$ constitute $(n-1) \times (n+1)$ grid matrix which accommodate the whole range of double digit number of $2n$ place value system.
23. In particular, in above case for situation $n = 5$, we shall be reaching at 9×11 grid matrix for accommodation of all 99 double digit number of 10 place value system.
24. The next organization $(n-2, n+2)$ shall be leading us to a five folds transcendence range with pair of end values $(n-2)$ and $(n+2)$, viz $(n-2, n-1, n, n+1, n+1)$ with a summation value $5n$ and it shall be leading us to the transcendence phenomenon within transcendental domain (5-space domain) which otherwise is manifesting a format for 5 place value systems.
25. It would be a blissful to take note that $4n = 5$ the above range value $5n = 25$, shall be leading us to the set up of 24 double digit number for 5 place value system along 4×6 grid format and single number of triple digit of five place value system which take value '0100'.
26. Like that there are very large numbers of application of such formats.
27. Illustratively 5-space plays the role of transcendental boundary of hyper cube 6 of 12 components and the organization of 12 components as (5, 7), and ahead (4, 8) and sequentially like that will bring unto play of 5-place value system and 10 place value systems and their by emerges a transcendental range of applications of geometric for algebraic and arithmetic application..
28. My reach in this domain convinces me that the coherence and unity being expected for the mathematical domain, is a lively phenomenon here and same is to be blissful glimpse and the imbibed by the

Sadhakas of Vedic Mathematics, Science & Technology,
in particularly. ■

GEOMETRY ALONG MANIFESTATION FORMAT

CONTENT

1. Existence phenomenon chase

GEOMETRY ALONG MANIFESTATION FORMAT

1

EXISTENCE PHENOMENON CHASE

1. Knowledge systems chase existence phenomenon.
2. Existence phenomenon happens within frames, as well as without frames.
3. Existence phenomenon within frames is approached by Vedic systems by approaching space in terms of dimensional frames.
4. Space within a given dimensional frame gets contain as of space contents of that dimensional order. The dimensional space contents manifests as lumps as domain folds of dimensional bodies of that dimensional space.
5. Framed domain as its is, it has a dual frame, firstly because of dimensional frame, it secondly because of enveloping boundary.
6. Normally the origin of domain fold remains in a sealed state but inherently it is full of potentialities to attain transcendence at the origin fold for a reach up till the base fold.

7. Framed existence phenomenon, including of us as within our bodily framed as respective restriction of the frame.
8. As such, the existence phenomenon within a frame deserves to be chased in reference to restriction because of a frame, and further it also deserves to chase in the light of its potentialities to attain transcendence at the origin.
9. On the other hand the existence phenomenon without frame, takes us to the formats beyond that of Sathapatya measuring rod it is this chase, with respect to it, with the human being have to glimpse and imbibe there values as well and to acquire appropriate insight and proper enlightenment of such existence phenomenon.
10. Vedic system chase existence phenomenon, in its entirety, covering both within frames, as well as without frames.
11. The basis base mathematics of Vedic system takes us to phenomenon of transcendental carrier which in first phase , take us up till orb of the sun, where from Brahman carrier take over, and thereby there happen a reach up till self sustaining source reservoir of self sustain-ness.
12. So sustain manifestation settle the format for chase of geometries systems.
13. The manifestation and dissolution of frames is one feature which takes central place in geometric systems domain.
14. This simultaneous happening of manifestation and dissolution of manifestation is the feature which deserves to be glimpsed thoroughly for its complete imbibing.
15. Likewise reach from geometric systems to manifested creation existence phenomenon, and the other way

round, beginning with manifestation creation system and reaching up till geometric system becomes a two way chase system.

16. As for as the existence phenomenon without frame is concerned being, in respect of this, transcendental carriers come at the centre and the geometry of transcendental carriers makes a transcendental domain systems mathematics.
17. Here is would be relevant to take note that creator's space (4-space) accepts transcendental origin, and that way transcendental system take us to the origin fold and transcendence there from to base fold.
18. Mathematics of Ganita Sutra and upsutras coverage of transcendental domain systems deserves to be glimpsed thoroughly for their full imbibing and completer appreciation as in terms of it one shall be acquiring appropriate insight and enlightenment about mathematics, sciences and technologies of transcendental domain (5-space). ■

TRANSCENDENCE DOMAIN TO BRAHMAN RESERVOIR

CONTENT

1. Phased way one phased to glimpse
2. Transcendental range 5,6,7,8,9
3. Sequential value of synthesis of 5 dimensional of same order
4. Sequential value of synthesis of 6 dimensional of same order
5. Sequential value of synthesis of 7 dimensional of same order

6. Sequential value of synthesis of 8 dimensional of same order
7. Sequential value of synthesis of 9 dimensional of same order
8. Parallel value sequence
(5,9,14,20,27 ...)
(5,6,7,8,9 ...)

TRANSCENDENCE DOMAIN TO BRAHMAN RESERVOIR

1

PHASED WAY ONE PHASED TO GLIMPSE

1. One phased way to glimpse transcendental domain to Brahman reservoir phenomenon is to have a sequential reach as '5-space, 6-space, 7-space, 8-space and 9-space.
2. It shall be bringing to focus and a transcendental range of the set up of hyper cube 5 to hyper cube 9 manifesting within creator's space (real 4-space).
3. First location of this transcendental can be glimpsed compactified range of origin at the seat of origin of 4-space.
4. Parallel artifices of numbers range is (5, 6, 7, 8, 9) of summation value 35 which is parallel to dimensional frame of 7 transcendental dimensions set up.
5. It would be blissful to take note that absolute value 35, which lead to pair of values (-35, 35), the same as $35 = 5 \times 7$ is parallel to 7-space dimensional frame, and the value (-35) is parallel to the summation value of a pair of

- transcendental ranges of negative transcendental dimensions order.
6. It also would also be relevant to take note the pair of value (35, 53) constitute a reflection pair of artifices with value 35 and value 53 availing double digit placements of zero numbers of dimensions seat and single dimension seat.
 7. It would be a blissful to permit the transcending mind to continuously remain in prolonged sitting of trans and to glimpse and imbibe above features of transcendental domain to Brahman reservoir phenomenon set up.

2

TRANSCENDENTAL RANGE 5, 6, 7, 8, 9

8. This transcendental range is a five step long transcendence path for inward transcendence at transcendental origin of creator's space.
9. This as a compactified range shall be sequentially unfolding with unseen state at the origin of 4-space.
10. As such, the first unfolding phased will amount to a release of transcendental domain and origin of 4-space.
11. The second unfolding phase will be of reach value until 6-space as base fold.
12. The third unfolding phase shall taking to 7-space as format.
13. Fourth step shall take to 8-space as state sustaining format.
14. Finally, there would be a reach to Brahman reservoir.
15. One shall sit comfortably and permit the transcending mind to glimpse and imbibe the values of sequential reach at transcendental domain (5-space) self-referral

- domain (6-space) unity domain (7-space), natural domain (8-space) and Brahman domain (9-space).
16. One may have a pause here and to take note that 9 as numeral range (1, 2, 3, 4, 5, 6, 7, 8, 9), accepts numeral 5 is middle placement.
 17. Parallel to it the reach of one space to nine space takes to 5-space as of middle placement.
 18. Likewise, hyper cube 5 is going to be middle placement.
 19. It would be a blissful to take note that of the triple perfect number (6, 28, and 496); the middle perfect number 28 accepts 5 proper divisors.
 20. Perfect number 6 accepts 3 proper divisors, while perfect number 496 accepts nine proper divisors.
 21. It would further be blissful to take note that '6' is a Surya Ank / Sun number.
 22. Number 28 is parallel to transcendental code value 28 of formulation Braham.
 23. One shall sit comfortably and permit the transcending mind to continuously remain in prolonged sitting of trans and to glimpse and imbibe the above features.
 24. Further one shall glimpse the transcendental phenomenon at transcendental origin of creator's space. still further, it would be very blissful to take note that 5 basic roles of 5-space are:
 - (I) 5-space as domain playing the role of origin of 4-space.
 - (II) 5-space as domain playing the role of boundary of 5-space.
 - (III) 5-space as domain as dimension of 7-space.
 - (IV) 5-space as dimensional order of set up with 8-space as origin.
 - (V) 5-space as dimensional order of transcendental range with 9-space as base.

3

**SEQUENTIAL VALUES OF SYNTHESIS OF 5
DIMENSIONS OF SAME ORDER**

25. The value sequence (15, 10, 5, 0, -5, -10, -15 ...) is parallel to the synthesis of 5 dimensions of linear, spatial, solid, creative and transcendental and higher dimensional orders.
26. One may have a pause here and to take note that the constitute value of this sequence of values as a difference value '5'.

4

**SEQUENTIAL VALUES OF SYNTHESIS OF 6
DIMENSIONS OF SAME ORDER**

27. The value sequence of synthesis of 6 dimension leads to difference value for constitutes pair of values as '9'.

5

**SEQUENTIAL VALUES OF SYNTHESIS OF 7
DIMENSIONS OF SAME ORDER**

28. The value sequence of synthesis of 7 dimension leads to difference value for constitutes pair of values as '14'.

6

**SEQUENTIAL VALUES OF SYNTHESIS OF 8
DIMENSIONS OF SAME ORDER**

29. The value sequence of synthesis of 8 dimension leads to difference value for constitutes pair of values as '20'.

7

**SEQUENTIAL VALUES OF SYNTHESIS OF 9
DIMENSIONS OF SAME ORDER**

30. The value sequence of synthesis of 9 dimension leads to difference value for constitutes pair of values as '27'.

8

PARALLEL VALUES SEQUENCES

(5, 9, 14, 20, 27 ...)

(5, 6, 7, 8, 9 ...)

31. One shall have a fresh look at the organizational set up of sequential values of following pair of sequences.
- (I) (5, 9, 14, 20, 27 ...)
- (II) (5, 6, 7, 8, 9 ...)
32. In reference to above sequence it comes to pointed attainsaned :
- (I) $5 = 5 \times 1$
- (II) $9 = 6 \times 3 / 2$
- (III) $14 = 7 \times 2$
- (IV) $20 = 8 \times 5 / 2$
- (V) $27 = 9 \times 3$
33. One may have a pause here and to have a fresh look at the above interrelationship feature.

34. It brings us to pointed focus the sequential role of third sequence (1, $3/2$, 2, $5/2$, 3 ...), in the context of the above pair of sequences of values.
35. One may have a pause here and to take note that this third value sequence (1, $3/2$, 2, $5/2$, 3 ...) is also taking care of middle placement values of pair of constitute value of sequence of value (1, 2, 3, 4, 5 ...).
36. One may have a pause here and to take note that, the above mentioned third sequence, while including middle placement value as well, becomes of features of bridging the gaps between the whole numbers values sequence.
37. It is this feature of bridging the gaps between the discrete wholes numbers which makes the transcendental domain and transcendence phenomenon within transcendental domain, the phenomenon of attainment of continuity.
38. With it, the superiority and success of Vedic Mathematics over other systems, is self evident.
39. Sequentially taking with Ganita Sutra 1 as arithmetic, Ganita Sutra 2 as algebra, Ganita Sutra 3 as geometry and Ganita Sutra 4 as manifestation, a step head Ganita Sutra 5 will takes us to transcendental domain.
40. Ganita Sutras 6 to 9 shall be sequentially taking us to self-referral domain, unity domain, natural domain, Brahman domain.
41. With Ganita Sutra 10 with reflection pair (10,01) shall be on a double digit format shall be giving reversal reach back to '08', and sequentially the reversal process will step in and there would be a reach back up till Ganita Sutra 2.
42. This way, the sequential unfolding of Vedic Mathematics system brings us face to face with

transcendental reach of Vedic Mathematics.

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VEDIC MATHEMATICS TEACHER MANUAL CLASS IX

SECTION-1 INTRODUCTORY

1

VEDIC MATHEMATICS TEACHER MANUAL

1. Each system is to be approached the system way.
2. Vedic Mathematical system is of a self-referral approach, which permits chase of Conceptual terms which presume existence of their respective basic conceptual terms.
3. Basic conceptual terms are: Here a few basic conceptual terms are being mentioned at the outset, being, dimensions, boundary, domain, origin, base, format, state, source, reservoir, virtue, value, feature, order, linear, spatial, solid, hyper solid, creative's, transcendental, self-referral, unit state, and natural order;

manifested domain, manifestation layer, hypercube, transcendental range, self referral range, unity state, natural phenomenon, solar universe, human frame.

4. These basic conceptual terms, natural will take us to their basic terms, which further will take us to their basic terms and may go ad-infinitum but, we may chasing system processing presuming availability of just start with basic conceptual terms. Instead of going to basic conceptual terms of basic conceptual terms, we may take help for understanding conceptual terms, from the actual applications thereof is concrete illustrative application thereof in the form of mathematical entities being our mathematical tool as well , like 'cube', in respect of 'cube' its prominent features, as that it is a solid, a 3 space body, its volume being an expression of 3 space content lump, like, its other structure features etc, may be availed as mathematical applications of respective concepts them.
5. We may sit comfortably and permit our transcending mind to glimpse and imbibe. Conceptual base of the set up of cube, on the whole, as well, as about its different structure components
6. 3 space content manifesting as volume of cube , as its domain fold, will help us concertize and comprehend the basic conceptual terms ' domain fold' of a dimensional body which shall be taking us to 'area' of square as domain fold of 2-space body as square is. Likewise 'length' of an interval will bring us face to face with 'domain fold' of space body, as interval is.
7. 'Length', 'Area' and 'Volume' are expressions of domain-folds of interval, square and cube being bodies of 1-space, 2-space, and 3-space. This Illustration, and likewise their similar illustrations will help us have

appropriate insight and desirable enlightenment about conceptual terms like 'domain fold'.

8. 'Cube' and other 3-space bodies are having domain fold (volume) as one of the features of the structural set-up of 'cube' and other 3-space bodies. Likewise 'square' and 2 space bodies are having domain fold (area) as there are of the basic features of 2-space bodies. Still further, 'interval' and other 2-space bodies are having domain fold as one of their structural features.
9. One other conceptual term is boundary fold, Let us re-visit the set ups of 'interval', 'square' and 'cube'. Interval has a pair of end points. Square has four boundary lines 'cube' has six surface. These pair of end points, quadruple lines and six surfaces is the boundary folds of interval, square and cube respectively.
10. One shall sit comfortably and permit the transcending mind to glimpse and imbibe the values and features of 'boundary fold' of dimensional bodies/bodies of 1, 2, and 3 space.
11. Interval takes us to its 'boundary fold' constituted by 'points', the 0-space bodies. 'Square' takes to its 'boundary fold' constituted by 'line'/1-space bodies. A step ahead, 'cube', a 3-spacebody, has surfaces/2 space bodies constituting 'boundary fold'.
12. This shall be bringing us face-to-face with the feature of 'boundary fold' as that:
 - i. '0-space' plays the role of boundary fold of '2-space body'.
 - ii. '1-space' plays the role of boundary fold of '2-space body'.
 - iii. '2-space' plays the role of boundary fold of '3-space body'.

13. This further brings us face-to-face with one another feature of dimensional bodies of 1, 2, 3 space. It is as that:
- i. 'Interval' has boundary fold of 2 components.
 - ii. 'Square' has boundary fold of 4 components.
 - iii. 'Cube' has boundary of 6 components.

Further as that:

- iv. Domain fold of 'interval' is expression of single dimension, which permits as expression ' A^1 '.
- v. Domain fold of 'square' is expression of a pair of dimensions which permits as expression ' A^2 '.
- vi. Domain fold of 'cube' is expression of triple dimensions which permits as expression ' A^3 '.

Further as that:

- vii. Boundary fold of 'interval' permits expression as $(2B^0)$.
- viii. Boundary fold of 'square' permits expression as $(4B^1)$.
- ix. Boundary fold of 'cube' permits expression as $(6B^2)$.

Further, domain fold and boundary fold of dimensional bodies of (1, 2, 3-space), namely, interval, square and cube permit expression as:

- x. Domain boundary of 'interval' permits expressions as $A^1:4B^1$.

- xi. Domain boundary of 'cube' permits expressions as $A^3:6B^2$.
14. One may have a pause here and permit the transcending mind to glimpse and imbibe above features of 'interval', 'square', and 'cube', permitting expression in terms of common domain boundary formulation.
 $A^n : 2NB^{n-1}; N = 1, 2, 3$.

2

ORIGIN FOLD

1. 'Origin – fold' of dimensional bodies of 1, 2, and 3 spaces, namely: interval, square and cube, is one another conceptual term.
2. In fact, 'origin-fold' is one of basic conceptual term. It takes us to 'origin' of a dimensional space. It further takes us to location of 'origin' of a dimensional space within a dimensional domain fold. This further takes us face to face with 'centre' of the domain fold being the seat of 'origin' of the dimensional space. Let us visit and revisit the set-ups of interval, square and cube, the representative regular bodies of 1, 2, 3 space respectively.
3. One may have a pause here and take note that representative regular body of a dimensional frame does

not prefer any dimension over any other dimensional body becomes a uniformly reached point his reference to each of the boundary component of a representative regular body.

4. Conceptually 'uniform reach' from each boundary component of a representative regular to centre of domain fold, inherently means that no boundary component has preference over any other boundary component as far as the reach to it from centre is concerned.
5. One may have a pause here and take note that 'centre' becomes the synthesis source values reservoir for set up of a dimensional being a synthesis set-up of a pair of dimensional frames of half dimension. Each dimension becomes a synthesis set up of a pair of half-dimensions.
6. Let us visit and re-visit the set-ups of 'interval', 'square' and 'cube', as 1, 2 & 3 space bodies. 'Length', 'area' and 'volume' are the expression of the domain folds of interval, square and cube respectively.
7. This takes us face-to-face with 'middle point' of interval as 'centre' of interval, as set of origin of 1-space, and also as the synthesis source reservoir (point-reservoir)/ Bindu sources/ origin fold of interval/ hypercube 1.
8. 'Centre' of square is the seat of origin fold of square/hypercube 2.
9. 'Centre' of 'Cube' is the seat of 8 'origin-fold' of cube / hypercube-3.
10. 'Centre', as seat of origin fold, is synthesis source reservoir of values and it plays the role of 'origin' of the dimensional frame 8. At this seat, each of the dimension if the dimensional frame splits into a pair of half dimension, while 'centre' separate itself as an independent identity.

3

SPLIT OF CUBE

INTO 8 SUB-CUBES

1. Space within 3 dimensional frame splits into 8 octants and parallel to it 3-space splits into 8 octants.
2. Let us have a pause here and to glimpse the placement of innermost corner points of all the sub cubes of centre of it cube.
3. Placement of these 3, innermost corner points of centre make centre being enveloped by these 8 placements.
4. One may further have a pause here and take note that the centre of cube ultimately becomes the collapse placement for the equal sub cubes. It is like 'centre' being enveloped by 8 solid boundary components in its 0 'state' body of 'a space' within '3-space'.
5. 'centre' 'as a space' within a '3 space' transcending a 3 dimensional frame, is a compacted dimensional space beyond 3 dimensional frames.
6. One may have a pause here and to revisit the centre of a square. It is a seat of collapse of innermost corner points of quadruple quarter squares.
7. Centre of square is a collapse point of four square squares making centre as a '0 state' space body enveloped without a spatial boundary of four components transcending beyond 2 dimensional frame.

8. And centre middle point of an interval, in its zero state space body, transcends beyond a single dimensional frame.
9. 0 space body as centre of one space body, in a collapsing state as enveloped within a pair of linear component boundary, centre of square a 2-space body, in a collapse state as enveloped within a quadruple spatial component, boundary and centre of cube, a 3-space body, in a collapse state as envelop within 8 solid boundary components all happening simultaneously within cube, is a collapsing phenomenon which deserves to be comprehended well for its appreciation and imbibing to acquire appropriate insight and desirable enlightenment about it.
10. This three folds collapse at centre of interval, square and cube within cube itself, in fact is a collapse of single, double and three dimension of 3 dimensional in its '0 state' / a zero state three dimensional frame of zero state 3 space body.
11. One may further have a pause here and take note that this collapse brings to focus as that 'centre' transcend 3 dimensional framed as that 3-space dimensional frame collapse. It is this collapse feature which also brings into simultaneous collapsed cube within cube as well.
12. With this collapse of a cube within cube, in fact brings into a self-referral happening of ad-infinites reach for the set up of 'liner dimension' itself which being a format of hypercube 1 and its centre as seat of its origin fold getting released by splitting a linear dimension into a pair of half linear dimension; and then, a pair of linear dimension releasing quadruple half linear dimension; and finally all the 3 linear dimension releasing 8 half linear dimension, and these 8 half linear dimension set-up

- constituting a linear dimension set-up of 8 components geometric envelope for centre of cube.
13. One may further have a pause here and permit the transcendence mind to visit and revisit the set-up of cube with focus upon three dimensional frame of half dimension being imbibed in all the 8 corner points of cube and that orientations of all the dimensions of all the 8 dimensions and frames being 'inward' within set up of cube itself.
 14. One may further have a pause and permit the transcending mind to glimpse and internal structural set-up of 'cube'. It shall be bringing to focus that there are quadruple to pairs of 3 dimensional frame of half dimensions embedded of eight corner points of cube and four internal diagonals are their translations path formats.
 15. One shall further have a pause and permit the transcendental mind to glimpse and imbibe the features and values of translations in pairs of these 3 dimensional framed along four internal diagonals.
 16. Diagonal wise, the translation for the pair of 3 dimensional half dimensional is going to be inwards 4 both corner end points of a diagonal and with their reach (reach of corner points/end points) at the centre of cube, there is going to take place a synthesis pair of 3 dimensions into a 3 dimensional frame of full dimensions. So emerging a set up quadruple synthesized 3 dimensional framed of full dimensional together. It ascending available a 3 dimension frame of full dimension at the centre of cube, will make availability of as many as five such three dimensional frame of full dimensions.

17. One shall further have a pause here and permit the transcendence mind to visit and re-visit this happens within a cube and a 3 dimensional set-up transiting and transforming into a set-up of fine three dimensional frames with their 'origin' having placement at centre of cube itself.
18. One shall further have a pause here ad permit the transcending mind to visit and re-visit the set up of internal structural set up of a cube. 'Cube' splits into eight sub-cubes and thereby making a set up of 64 sub-sub-cubes, 8 corners will further lead to $8 \times 8 \times 8 = 512$ sub-sub cubes.
19. One may further have a pause here and to take note that Rig-Ved Samhita is a composition of 8 Ashtaks (octants) and is also a composition of 64 Adhiyayas (chapters).
20. Still further it also would be blissful to take note that there are précis elf 519 letters of entire text of Ganita sutras and up sutras, and together the transcendental source respective formulation of sole syllabus one makes it a set of 520 components.
21. Still further , it also would be blissful to take note that values choices from values triple (1 ,2, 3) shall be making a set of 4 combinations of value 3, namely (i) $4=4$, (ii) $4=1+3$ and (iii) $4=3+1$ and (iv) $4=2+2$. In general range of values (1, 2, 3, - - - - n) shall be heading to set of 2^{n-1} combinations of value 'n'. However the range (0, 1, 2, 3, - - - -, n-1) shall be leading to $(2^{n-1}-1)$ number of combining of value 'n' out of choice of values frame the range (0, 1, 2, 3, - - - n-1). It would be blissful to imbibe this feature well and to appreciate for its full imbibing as that:

- I. Choices of values from range (1, 2, 3, - - -, n) for combinations for reach at value 'n' come to be 2^n . While,
- II. Choices of values from the range (0, 1, 2, - - - -, n-1) for combination for reach at value 'n' comes to be $(2^n - 1)$. It is this relationship of ranges (1, 2, 3, - - - n) and of [0, 1, 2, - - - (n-1)] for reach of combination values for values n which deserve to be comprehended well.

4

NINTH SUB CUBE

1. One shall sit comfortably and permit the transcending mind to glimpse and imbibe the Ninth sub cube imposition upon the set-up of 8 sub-sub cubes each being innermost sub-sub cube of sub-cubes of cube.
2. Ninth sub-cube is of a centre superimposition upon the centre of outer cube.
3. Eight sub-sub cubes of ninth sub-cubes are innermost sub-sub cubes of sub-cubes of outer-cube.
4. Volume of ninth sub-cube is one eight of the volume of outer cube.

5

STRUCTURAL COMPONENTS

OF NINTH SUB-CUBE

1. To reach at structural component eight sub-cubes of ninth sub-cubes and then in terms their off to have a reach at the structural set up of ninth sub-cube itself, chase may be of following steps:

Step: 1.

To reach structural set of cubes (designated at original state with cube becoming the outer cube).

It leads to a set up of 27 structural components of sub-cube. These 27 structural components are:

- | | |
|----------------------------------|-------------|
| a) Volume component. | 1 |
| b) Dimensional frame components. | 4 |
| c) Surface components. | 6 |
| d) Edges components. | 12 |
| e) Corner point | 8 component |

Total $1+4+6+12+8=31$, other than that of dimensional frame $=31-4=27=3^3$ components.

Step: 2

To reach structure components of 8 sub cubes:

First sub cube 27 components.

Second sub cube 18 components.

Third sub cube 18 components.

Step 3:

To reach at structural components of 8 sub-sub cubes of ninth sub cubes

Ninth sub cubes

First sub-sub cube

Eight sub-sub cube of first sub cube = 8 components.

Second sub-sub cube

Seventh sub-sub cube of second sub cube = 12 components.

Third sub-sub cube

Forth sub-sub cube of third sub cube = 12 components.

Fourth sub-sub cube

Third sub-sub cube of fourth sub cube = 18 components.

Fifth sub-sub cube

Forth sub-sub cube of fifth sub cube = 12 components.

Sixth sub-sub cube

Third sub-sub cube of sixth sub cube = 18 components.

Seventh sub-sub cube

Second sub-sub cube of seventh sub cube = 18 components.

Eight sub-sub cube

First sub-sub cube of eight sub cube =

6

SYNTHESIS OF 8 CUBES

1. Synthesis of 8 cubes is as synthesis of 8 sub cube of a cube.
2. This set up of is of two blocks of four sub cubes each.
3. First block is, the upper block of 4 cube leads to:-
 - (i) 27 components of first sub cube.
 - (ii) 18 components of second sub cube. These 2 sub cube of first row of first block. The second of first block consist of third and forth sub cubes.
 - (iii) These two sub cubes of second row of first block are respectively:
 - a) 18 components.
 - b) 12 components.

4. The first row of 2 sub cubes has total structural components $27+18 = 45$ components.
5. The second row sub cubes contribute $18+12 = 30$ components.
6. Total components of first block of its both rows come to be $45+30 = 75$ components. Second block as well is of 2 rows.
7. Two sub cubes of first row of second block contribute $18+12 = 30$ components.
8. Second row of second block pair of sub cubes contribute $12+8 = 20$ components.
9. Total contribution of both rows of second block quadruples cubes, sub cubes contributes $30+20 = 50$ components.
10. Grand total of all the component of all the sub cube of both first and second block of there both rows set up of eight sub cubes comes to be $75+50 = 125$ components.
11. One may have pause here and take note that $125 = 5 \times 5 \times 5 = 5^3$.
12. As one cube has 27 structural components as such 8 cubes as 8 sub cubes respectively contribute only (27, 18, 18, 12, 18, 12, 12, 8) component respectively.
13. In this process, structural components which go absent in the synthesis process come to be (0, 9, 9, 15, 9, 15, 15, 19) within respectively case of sub cube 1 to 8.
14. These absent structural component range (0, 9, 9, 15, 9, 15, 15, 19,) is of summation of 91.
15. The absent component 91 and present component 125 together a sum of $91+125 = 116 = 6 \times 6 \times 6 = 6^3$.
16. The difference value $125-91 = 34 = (7+8+9+10)$ is the summation value of four fold manifestation layer (7, 8, 9, 10,) of hypercube -9.

17. One may have here and take note that synthesis of four squares as of quadruple of square contribute $(9+6+6+4) = 25 = 5 \times 5 = 5^2$ structural component.
18. The absent component of quadruple quarter squares is $(0, 3, 3, 5)$ of summation value 11. Similarly synthesis of a pair of interval as a pair of half intervals becomes a set of $(3+2) = 5$ component only and the number of absent components comes to be $(0+1) = 1$.
19. One shall sit comfortably and permit the transcendental mind to glimpse and imbibe the value of synthesis value of a pair of Interval, Quadruple Square and its 8 Cubes. Further one shall glimpse and imbibe the absent and present structural component in respect of interval, square and cube.
20. It would be blissful exercise further chase this synthesis process of four interval, sixteen square and 64 cubes.
21. Still further, it would blissful to glimpse and imbibe synthesis of middle pair of interval of, middle quarter square and middle 8 cubes.
22. It would be blissful to take note that middle pair of interval becomes middle pair of half interval.
23. Middle quadruple squares become middle quadruple quarter squares. And middle 8 cubes become 8 sub-sub cubes.
24. One shall sequential reach at structural components of synthesized middle pair of half intervals, middle synthesized quadruple quarter square and middle 8 sub-sub cubes.
25. The contribution of structural component because of second and third half interval comes to be of $2+2=4$ components out of 12 components of 4 intervals.
26. Contribution of structural component by middle quadruple quarter square comes to be of $4+6+4=16$

- components out of 36 components of quadruple squares.
27. Further contribution of middle 8 sub-sub cubes comes to be
- I. Eight sub-sub cubes of first octant would be the first sub-sub cube of ninth octant.
 - II. Seventh sub-sub cube of second octant would be the second sub-sub cube of ninth octant.
 - III. Sixth sub-sub cube of third octant is the third sub-sub cube of ninth octant.
 - IV. Fifth sub-sub cube of fourth octant is the fourth sub-sub cube of the ninth octant.
 - V. Forth sub-sub cube of fifth octant is the fifth sub-sub cube of ninth octant.
 - VI. Third sub-sub cube of sixth octant is the six sub-sub cube of ninth octant.
 - VII. Second sub-sub cube of seventh octant is the seventh sub-sub cube of ninth octant.
 - VIII. First sub-sub cube of eighth octant is the eight sub-sub cube of ninth octant.
28. One may have pause here and take note that first sub-sub cube of eight octant contribute only 1 structural component this as such become s the structural contribute by eight sub-sub cubes of ninth octant.
29. The second sub-sub cube of seventh octants contributes.

SYNTHESIS OF 64 CUBES

**TABLE OF STRUCTURAL COMPONENT PRESENT
DURING SYNTHESIS OF 64 CUBES**

S. No.	Block	Row	Sub-sub cube 1	Sub-sub cube 2	Sub-sub cube 3	Sub-sub cube 4	Total
1	1	1	27	18	18	18	81
2	1	2	18	12	12	12	54
3	1	3	18	12	12	12	54
4	1	4	18	12	12	12	54
5	2	1	18	12	12	12	54
6	2	2	12	8	8	8	36
7	2	3	12	8	8	8	36
8	2	4	12	8	8	8	36
9	3	1	18	12	12	12	54
10	3	2	12	8	8	8	36

11	3	3	12	8	8	8	36
12	3	4	12	8	8	8	36
13	4	1	18	12	12	12	54
14	4	2	12	8	8	8	36
15	4	3	12	8	8	8	36
16	4	4	12	8	8	8	36
17							$729=9^3$

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S. No.	Block	Row	Sub-sub cube 1	Sub-sub cube 2	Sub-sub cube 3	Sub-sub cube 4	Total
1	1	1	0	9	9	9	27
2	1	2	9	15	15	15	54
3	1	3	9	15	15	15	54
4	1	4	9	15	15	15	54
5	2	1	9	15	15	15	54
6	2	2	15	19	19	19	72
7	2	3	15	19	19	19	72
8	2	4	15	19	19	19	72
9	3	1	9	15	15	15	54
10	3	2	15	19	19	19	72
11	3	3	15	19	19	19	72
12	3	4	15	19	19	19	72
13	4	1	9	15	15	15	54
14	4	2	15	19	19	19	72

COMPARATIVE VALUES OF ABSENT AND PRESENT COMPONENT DURING SYNTHESIS 64 CUBES

1. It would be blissful to take note that there are equal number of absent components (729) and equal number of component present (729) during synthesis of 64 cubes.
2. The value $(729+729) = (1458) = (1457+1) = (27 \times 64 - 27 \times 10) = (27 \times 54) = (2 \times 3^3 \times 3^3 \times 3^6) = (3^6 + 3^6) = (9^3 + 9^3) = (729 + 729) = (\text{absent component} + \text{component present})$ during synthesis of 64 cubes. One shall sit comfortable and permit the transcending mind to glimpse and imbibe above feature of above structural feature in case of 64 cubes.
3. The inner most 8 sub-sub cubes out the range of 64 sub-sub cubes are of placement of serial no (18, 19, 26, 27, 38, 39, 42, 43).
4. Each of these 8 sub-sub cubes contributes 8 structural components and thereby they all make out a structural set up of $(8 \times 8) = 64$ Structural component.
5. It is this feature of 9th sub cubes constituted by middle 8 sub-sub cubes, which deserve with the comprehended well.
6. The 9th sub cube, as such, is constituted by innermost sub cubes of 8 sub cubes of the cube.
7. Taking centre of the cube as independent structural entity to same together with the 64 component of 9th sub cubes, will be make a set up of 65 components.

8. One may have a pause here and take note that $65 = (13 \times 5)$ brings us face to face with this unique feature of this ninth sub cube at the middle of the cube.
9. This feature is as it is constituted, makes out the centre and imbibes solid boundary of 8 components, which is parallel to centre being a seat of 4 space excepting solid boundary of 8 solid components, with each solid component being a set up of 8 structural components of
10. One may have a pause here and take note that each corner point of cube embedded with a 3 dimensional frame which sustains structural set up of 3 surfaces and the volume sustains within 3 surface plates.
11. One may have a pause here and take note that this makes out a structural set up of a 8 component namely 1 corner point plus 3 axes plus 3 surfaces plus 1 volume.
12. This way, it would be blissful to take note that this structural set up of cube is parallel to structural set up of ninth sub cube of the cube.
13. One shall sit comfortably and permit the transcendent mind to glimpse and imbibe this phenomenon of this set up of a cube. This brings us face to face with the foundation format of 3-space Mathematics, Science, and Technology.

**SACROSANCT RESPONSIBILITY
OF VEDIC MATHEMATICS TEACHERS**

I

GANITA SUTRAS TEXT CENTRIC START

1. Vedic Mathematics values and virtues are sacrosanct.
2. To intense young minds for comprehension and imbibing of Vedic Mathematics values and virtues and sacrosanct responsibility of Vedic Mathematics.
3. Young mind are fulfilled with innocence.
4. This is the sub line state of young mind.
5. Being a sub line state, the superimposing of any value or even virtue upon this state is permissible only of feature parallel to feature of innocence.
6. To cope parallel to the innocence, in its self is a challenge which can be accepted by enlightened Soul.
7. Vedic mathematics teacher's consciousness is too blissfully and enlightened for acceptance the sacrosanct responsibility for intension of young mind for comprehension and imbibing for the values and virtues of Vedic Mathematics.
8. Enlightened consciousness fulfilled mind of the teacher, at one end, end innocence fulfilled young mind. On the other end will format flow of values and virtues of Vedic mathematics from the mind of teacher for reach into

- young mind, without in any way, causing any stretch upon the innocence of young mind.
9. It is this flow of format which Vedic Mathematics teacher consciously and enlightened oneself.
 10. This as such is going to be the ultimate ideal index of attainment of Vedic Mathematics Teacher Training Institute.
 11. The trainers trainer of Vedic mathematics Teachers training institute have to plan their indication step or orientation course to help Vedic Mathematics teacher to attain enlightened concenouness index so that imparting Vedic Mathematics values to young mind becomes a smooth flow of gentle step parallel to the inherent absorption value and feature of innocence .
 12. The initiation step and orientation courses are to be Ganita Sutras centric.
 13. Text of Ganita sutras being very small (just of 16 sutras and 13 upsutras), the same be memorized in a few restricting. with farm mental imprint of this text, the whole range of 519 letters of this text , there distinct placement imprints shall be making their respective value reservoirs
 14. Values fountains from these sources reservoirs is going to be a lively phenomenon for Vedic Mathematics teacher and Vedic Mathematics students, who even take help of written text with them.
 15. With text standing firmly in imprinted in mind, whole range of mathematics of Ganita sutras would be just a mental exercise. And Vedic Mathematics, that way, become mental Mathematics.

II

SUTRASWISE CHASE

1. Geeta Sutras centric approach is of the sutras wise chased feature.
2. To start with, the sequence of sutras is to be maintained.
3. First sutra is to be taken first, followed by second sutras, and like that sequence is to be maintained optical last sixteenth sutras.
4. Likewise during initial learning and comprehension of values, Ganita upsutras as well to be taken up in there sequence order beginning with first Ganita upsutras followed by second Ganita upsutras, and like that, to have a reached optical last thirteenth Ganita sutras.
5. The first phase of chase of values Ganita sutras and Ganita upsutras shall be to approach each Ganita sutra and Ganita upsutra being a complete unit in its self.
6. This way mathematically domain of Ganita sutras and Ganita upsutras becomes a set of 29 units.
7. It would be blissful to comprehend 29 unit values of mathematically domain together as a coverage of entire mathematically domain.

III

SECOND PHASE READING AND LEARNING

1. During second phase of reading and learning of Vedic Mathematical domain of Ganita sutras and upsutras,

each sutra and upsutra to be chased letter wise, beginning with first letter and reaching up till last letter of the unit text.

2. One may have pause here and take note that each letter of text is of specific value, as well as is of specific placement format.
3. The value and placement of each letter of the text is as value and placement of respective letter as per its placement in the Devnagri alphabet. This as such focus upon the values and placement format of letter of Devnagri alphabet.
4. As such, as a first step of this second phase reading and learning, one shall learn and appreciate the values and placement formats of the letter of the text of Ganita sutras and upsutras.
5. Here it also would be relevant to note that the texts of Ganita sutras and upsutras and avails 529 letter but of them there are only 36 distinct letters.
6. As such one shall tabulate values and format of these 36 distinct letters of Devnagri alphabet format and to imbibe them fully.
7. The second step of learning during this second phase would be to sequentially reach that sub formulation standing composed during sequential letter wise chased of the text of specific Ganita sutra /upsutra.
8. The chain sub formulation of a given sutra/upsutra shall be a sequential change of the values of mathematical domain of the concerned sutra/upsutra.
9. One may have pause there and take note that in term of emerging chain of sub formulation of the text of a given sutra/upsutra shall be making internal origination of the Mathematically domain of the given sutra/upsutra. As such during this second phase of learning one shall be

taking up following exercise to proper comprehended imbibe the values of Mathematics domain of sutras and upsutras as a set up of 29 units of Mathematically domain:

- (I) Reached at sequential tabulation of the letter of the each Ganita sutra and upsutra.
 - (II) To have tabulation of values and format of letters of each sutra and upsutras.
 - (III) To reach at the chain sub composition (formulation) for the text of each Ganita sutra and upsutra.
 - (IV) To reach at values and format for the chain of sub composition (formulation) of each Ganita sutra and upsutra.
10. One may have pause here and take note that as there are 16 sutra and upsutras, and as there are 529 letter of entire, as such it shall be making lengthy exercises in the form of tabulation of the values and format of individual letters as well as of every sub formulation of all the sutras and upsutras.

IV

CHASE OF CHAIN OF SUB FORMULATION

1. Each sutra and upsutra leads to a chain of sub composition (formulation).
2. Each letter as a specific value and specific placement format and as such, every letter is a completer source of specific values domain and specific geometric format.

3. Sub composition sequentially placed letter shall be making a structural setup of more than one values source domain of the specific geometric format.
4. With it, to reach at value and format of a given sub composition would mean to reach at structural setup composed by the values domained and there geometric format of the letter of the sequential format of the sun composition emerging at Mathematical formulation.
5. It is glimpsing and imbibing of the feature of the values and format of structural set up of sub composition of the chain of text of a given sutras and upsutras that one shall be glimpsing and imbibing the values of mathematical domain of a given sutra/ upsutras
6. It would be a blissful exercise to sequence glimpsing and imbibing values beginning to Ganita sutra one and reaching up till Ganita sutras 16.
7. Likewise one shall reached beginning with Ganita sutras and reaching up till Ganita sutras 13.

VEDIC MATHEMATICS
THE WAY TO TEACH AND LEARNING

II

SUTRAS CHASE ALONG
SATHAPTYA MEASURING ROD

1. Ganesha Sutras are appendix portion of Atharva Ved.
2. Atharva Ved settled Sathapatya measuring rod for chase of Existence Phenomena.
3. Sathapatya measuring rod is setup of synthesis setup of hyper cubes 1 to6 space.
4. Hypercube 1 to 6 are representative regular body of 1to6.
5. Hypercube is a four-fold setup of dimension, boundary, domain, origin.
6. These folds are parallel to four consecutive number values.
7. Hypercube 1 is a four-fold setup of values (-1, 0, 1, 2).

1

APPROACHING SPACE AS 3-SPACE

16. The central thought of 3-space mathematics science and technology is to approach space as 3-space.
17. To approach space as 3-space means to approach space within and in terms of a dimensional frame of 3 linear dimensions.
18. Linear dimension avails the format of a line / a set up of one space.
19. 3 linear dimensions are 3 lines (axis) with their middle points of same placements, designated as origin of 3 dimensional frames.
20. Origin of 3 dimensional frames splits each dimension into a pair of part, individually designated as half dimensions.
21. These way 3 dimensional frames yield six of dimensions.
22. These six half dimensions together with origin make a set off seven structural components of a 3 dimensional frame.
23. As such, the first value of 3-space which may inculcated and to be imbibed in the young mind is this structural feature of a three dimensional frame itself.
24. Sequentially the teaching steps, in the context would be :
 - (I) To specially bring to focus the space around us and which we exist.
 - (II) To fix space (as a set up) in terms of a three dimensional frame of above mentioned seven structural components (six half dimensions and seventh origin).
25. Now, for further features of 3 space, its 3 dimensional frame be approached pair wise as :
 - (I) First and second axis
 - (II) Second and third axis
 - (III) Third and first axis

26. This shall be bringing in a set of three plain, fixed by respective pair of axis.
27. With very gentle steps in the form of practically the demonstration, young mind the exposed the resultant cut of 3 space (a space within a 3 dimensional frame) standing cut in eight octants. ■

TECHNICAL TERMS

(I) Space (II) 3 space (III) 3 dimensional frame
(IV) Dimension (V) Linear dimension (VI) Axis (VII)
Line as axis (VIII) Middle point of line (IX) Middle
point of axis (X) Half axis (XI) Half dimension (XII)
Origin (XIII) Pair of axes (XIV) Triple pairs of axis
(XV) 3-space cut (XVI) Octants (XVII) 3-space cut as
eight octants. ■

STRUCTURAL COMPONENTS OF CUBE

1. A three space body, which does not distinguish between its axis is designated as a representative regular body of 3-space.
2. In the set up of a representative regular body of 3-space, no dimension is preferred over any other dimensions.
3. This feature makes such body being symmetrical in reference of each dimension and will make no difference when any of its dimensions gets replaced by any other dimension.
4. Cube is the representative regular body of 3-space.
5. The structural of cube accepts components as follow:
(II) 8 corner points (II) 12 edges (III) 6 surfaces and (IV) eight volume.
6. One may have pause here and take note that this makes a set of $8+12+6+1=27$ structural of set of a cube.
7. The number 27 accepts reorganization as $27=3^3$.
8. One may have pause here and have a fresh visit to triple cubes values ($1^3, 2^3, 3^3$).
9. $1^3=1$ is parallel to one cube.
10. $2^3=8$ is parallel to split of a cube into 8 sub cubes.
11. $3^3=27$ is parallel to 27 structural components setup of a cube.
12. A step head $4^3=64=8 \times 8$ is parallel to 64 sub-sub cubes as each of the eight sub cubes yields 8 sub cubes. ■

TECHNICAL TERM

(I). 3 space body (II) Representative regular body of 3 space (III) cube (IV) sub cube (V) split of cube as 8 sub cube (VI) 64 sub-sub cubes (VII) values triples $(1^3, 2^3, 3^3)$ (VIII) values quadruple $(1^3, 2^3, 3^3, 4^3)$ ■

SPECIAL NOTES

1. Cube sequence $(1^3, 2^3, 3^3, 4^3 \dots)$ deserves to be chased.
2. A^3 as a cube leads to a structural set up of 3^3 .
3. 2^3 as eight cubes (sub-sub cubes) lead to 5^3 structural components setup.
4. The first step above leads to relationship $(1^3, 3^3)$.
5. The second step above leads to relationship $(2^3, 5^3)$.
6. A step head will emerge a relationship $(3^3, 7^3)$.
7. In general the relationship would be $[(N^3), (2N+1)^3]$.

8. One may have pause here and take note that one space has 3 geometries ranges.
9. 2-space as 5 geometries range.
10. 3-space as 7 geometries range, in general n space as $(2n+1)$ geometry range.
11. Further as that hypercube 1 as three versions.
12. Hypercube 2 has five versions.
Hypercube 3 has 7 versions and in general hypercube n has $(2n+1)$ versions.



3 DIMENSIONAL FRAMES HALF DIMENSIONS

1. Each corner points of a cube is embedded with a three dimensional frame of half dimensions.
2. The orientations of half dimensions or inward towards the centre of the cube.
3. The other half of a three dimensional frame of full dimension is in a un-manifests form.
4. This second half of a three dimensional frame, in its unmanifests form, is within the set up of the space outside the cube.
5. This features of a three dimensional frame of full dimensions as a set up of a pair of 3 dimensional frame of half dimensions deserves to be glimpsed fully before the same is exposed to young minds for their comprehension and imbibing.
6. The pair of 3 dimensional frame of half dimensions are of distinct features, as much as that while one of the is in a manifest form and having orientation for its axis being inward towards the centre.
7. However the second such dimensional frame is in a un-manifests form and same is within the space outside the cube. This manifest and unmanifests features of this pair of framed of half dimensions while makes manifest frame bring within 3-space, the un-manifests is out side 3 space and is in four space.
8. It would also be blissful to take note that eight such frames embedded in the corner point of the cube get

- paired interns of quadruple internal diagonal of the cube.
9. This quardination feature of these framed, as well deserves to comprehended well , particularly in respect of their following glaring features:
 - (I) The corner points of cube, end point of the diagonal and origin of 3 dimensional frames embedded their gets superimposed.
 - (II) The orientation of the dimensions of the pair of 3 dimensional frames with origin at the corner points are opposite but facing each others and their placement being on the opposite side of the centre of the cube.
 - (III)The diagonal manifests the translation path for respective pair of its 3 dimensional frames.
 - (IV) Middle of the diagonal, centre of the cube, origin of 3 dimensional frame of full dimensions and origin of 3-space are having common placement.
 10. Translation and reach of respective of 3 dimensional frame of half dimensions at centre of the cube result into a synthesis lock resulting into synthesis of a pair of 3 dimensional frame of half dimensions into a 3 dimensional frame of full dimensions.
 11. As such the synthesis of a pair of 3 dimensional frame of half dimensions into a 3 dimensional frame of full dimensions and in a reverse process the split of a 3 dimensional frame of full dimensions into a pair of 3 dimensional frame of half dimensions deserve to be comprehend well and same to be thoroughly appreciated by imbibing their values and for acquiring proper insight and for attaining appropriate enlightenment of the phenomenon of synthesis and de synthesis of 3 dimensional frames. ■

BASIC CONCEPT

1. Synthesis and d-synthesis of a 3 dimensional frame is a basic conceptually phenomenon with deserve to be fully glimpsed and imbibed.
2. Glimpsing and imbibing shall result into comprehension and imbibing of the values of glimpsing of the value of the phenomenon.
3. Comprehension and imbibing of the phenomenon of synthesis and d-synthesis of a 3 dimensional frame shall be specific as to set up of dimensional frame itself and of manifestation of 3 space body within and interms of the dimensional frames.
4. A split of a 3 dimensional frame into a pair of 3 dimensional frames is one aspect of the phenomenon.
5. The synthesis of a pair of 3 dimensional frames of half dimensions into a 3 dimensional frame of full dimension is an another aspect of this phenomenon.
6. In the concrete situation of manifestation of cube as a representative regular body of 3-spaces further bring us to focus, all other feature of this phenomenon of synthesis and d-synthesis of 3 dimensional frames.
7. In the context the synthesis joint of 12 edges of the cube at the middle seat is one another specific aspect of this phenomenon which as well deserves to be comprehended well.

8. The split of a cube into 8 sub cubes and at centre of each sub cube their being a 3 dimensional frame of full dimensions is one another feature which also deserve to be comprehended well.
9. One shall sit comfortably and permit the transcending mind to glimpse and imbibe all the features. ■

CENTRE AS SEAT OF 4-SPACE

1. Centre of the cube is of a dual status.
2. Firstly it is like all other points of the volume (domain).
3. Simultaneously, centre of the cube is different than all other points of the volume/cube as that it is equally distinct from all corner points of the cube which features is no more there with any other point of the volume (domain).
4. Further as that centre of the cube is the seat of origin of 3 dimensional frames.
5. It is also seat of origin of 3-space.
6. Here meet in most corner points of all the eight sub cubes.
7. This seat (of centre), as it is, is enveloped by eight sub cubes (solids), and thereby make it is space accepting solid boundary of eight components.
8. This features as a space of solid boundary of 8 components, makes it is a seat of 4-space of 9 geometric / 9 versions of 4-space body.

9. As such, centre of the cube deserves to be glimpsed and comprehended by imbibing his values as of 4-space as well.
10. By accepting centre of the cube just as in other point of the cube amounts to sealing the origin of 3-space and forcing existence phenomenon only as of 3-space.
11. Centre of the cube is also the meeting point of the internal diagonal of the cube with the translation the 3 dimensional frame of half dimensions embedded into the corner points/end points, their reach at centre of the cube will have superimposition their of centre itself making a set up of nine points.
12. One may have pause here and take note that it also would amount to collapse of the cube itself at its centers.
13. One shall sit comfortably and permit the transcending mind to glimpse this phenomenon of translations of the 3 dimensional frames embedded in the corner points and their reach at the centre of the cube.
14. One shall further glimpse collapse of cube at the centre the collapsing of whole structural setup of the cube at the centre will make it a structural setup of $27+1=28$ components.
15. One shall sit comfortably and permit the transcending mind to glimpse this transition and transformation from the set up of 27 structural components into a structural setup of 28 components.



TECHNICAL TERMS

(I). Center of the cube (II) origin of 3 space (III) seat of 4-space (IV) seat of innermost corner points of eight sub cubes (V) collapse of cube at its centre (VI) structural set up of 28 components (VII) transition from structural set up of 27 components into set up of 28 structural components. (VIII) seat of space enveloped by solid boundary of eight components. (IX) dual states of centre of the cube. (X) center as point of 3-space, as well as point of 4-space.



5

INTERVAL SQUARE AND CUBE WITHIN A CUBE

1. Single axis manifests an interval.
2. Pair of axis manifests a square.
3. All the three axis manifests a cube.
4. Interval, square and cube manifests within a cube.
5. Interval accepts two end points and length in between as a setup of 3 components.
6. Square is a setup of 4 corner points, four boundary lines and a surface area, making a set up of 9 structural components.
7. Cube is a structural setup of eight corner points, 12 edges, 6 surfaces and a volume making a set up of 27 components.
8. The value triples (3, 9, 27) accept reorganization as (3¹, 3², 3³).
9. Further, cube within cube and interval square and cube within a cube which itself within a cube, leads to an add-infinity series.
10. One shall sit comfortably and permit the transcending mind to glimpse and imbibe these features well so that young minds can be properly exposed these feature of 3 space bodies.

**TECHNICAL TERMS**

(I) Interval (II) square (III) cube (IV) cube within a cube

(V) Value triples $(3^1, 3^2, 3^3)$.



CONCEPT

1. Interval within interval, square within square, cube within cube deserve to be chase as a concepts to glimpse re manifestation features for the manifested creations.



6

SPACE CONTENTS

1. Conceptually space permits compreshsion as a space contents.
2. When it is approached interms of single dimensional frame it comes with a compreshsion as one space contents.
3. When space is approached by a dimensional frame of a pair of dimension, space contents comes with an compreshsion as a 2-sapce contents

4. Likewise when space is approached in terms of a 3 dimensional frame, it comes with a comprehension as a 3 space contents.
5. Sequentially space contents get comprehended as 4-space content, 5-space contents, 6-space contents and so on.
6. Let us face a poser as to what is a 0space contents?
7. Going by the above approach when space would be approach in terms of a dimensional frame of 0 numbers of dimensions, the space content coming within over comprehension would be 0-space contents.
8. Let us have a pause here.
9. Let us take one space as of single dimensional expression.
10. Let us be a single stream flow.
11. Let it be a single attempt pick up.
12. Likewise 2-space with it's a pairs of dimensions and consequential pair of steam and hence a pair of pick up for the space (or as if from a space).
13. Likewise will be the stream and choices for 3, 4 and onward situations.
14. Now let us a pause again.
15. Let us ask a robot to pick up one packet from the adjoining room and to bring in here.
16. Robot obeys goes to next room and pick up one packet and bring in here there by there is an availability of one packet.
17. Now let the command for the robot is that it shall go twice and each to bring one packet here and with complain this command there would be availability of two packets here with us.
18. Likewise would follow 3, 4, 5, 6 and so on number of packets from the adjoining room with us this room?

19. Let us have a pause again.
20. Let us now reverse the command.
21. Robot be asked to take back 6, 5, 4, 3, 2, 1 sets of packets, step by step in the order those are brought to be taken back that way in parallel steps.
22. Let us again have a pause here.
23. When there is zero number of command for bringing a packet from the adjoining room and for it when there would be 0 number of command to back having been brought early, the same would be having no activity on the part of the robot he will not move no packet would be brought in no packet would be taken back, a wonderful situation.
24. At single command (in reference to single dimensional frame of one dimensional / single stream flow / single pick up) robot goes one and bring one packets.
25. For 0 space there is dimensional frame of 0 number of dimensions / there are 0 number of flow / there are 0 number of pickup) and robot simply does not move. He does not go to another room. As such no packet stand brought in. accordingly, no packet is to taken back.
26. This takes us to $0^0=0$.
27. In case there 0 commands for one space as well the result as well would be $1^0=0$. And in general $1^0=0$.
28. One shall sit comfortably and permit the transcending mind to glimpse and imbibe this phenomenon.
29. Now let us pause again.
30. A single time pick up command for single space will achieved single packet pickup and likewise there would be single packet pick up for two space, three space, 0 space and n space.
31. Again a wonderful situation:
 $0^1 = 1$ packet of zero entities

$1^1 = 1$ packet of one entities of value 1

$2^1 = 1$ packet of one entities of value 2

$3^1 = 1$ packet of one entities of value 3

$N^1 = 1$ packet of one entities of value n

32. One may have pause again.
33. Let us permit our transcending mind to glimpse our phenomenon and n^m with m as numbers of pickups of packets of entities of value n.
34. It would be blissful to take note that $0^0 = 0$, as well as one entities of value 0.
35. $N^0 = 0$ while $N^1 = N$ as one packet of one entities of value N.
36. These features of the dimensional spaces deserve to be comprehended well, particularly for 0^0 as 0 and 1 and for others $n^0 = 0$ and $n^1 = n$.



BLISSFUL EXERCISE

1. One shall sit comfortably and glimpse the phenomenon of 0 numbers of dimensions of dimensional spaces.
2. Further one shall also glimpse the value of single dimension of n dimensional order for all values of n, positive, 0, negative.
3. It would be blissful to take note that phenomenon of 0 number of dimensions leads to 0 values in case of in every dimensional space.

4. However in case of single dimension, the values come to be equal to dimensional order itself.
5. It is this feature which deserves to be specifically glimpsed in respect of zero space and also in case of 0 spaces as dimensional order.
6. In particular one shall glimpse 0^0 and 0^1 as 0 number of dimensional as 0 number of dimensions and as single dimension of 0 dimensional orders.
7. One shall visit and revisit the phenomenon 0^0 .
8. Also one shall visit and revisit the phenomenon 0^1 .
9. Further one shall visit and revisit the 0 as an absolute 0.
10. Further one shall visit and revisit the 0 as a whole number.
11. Also one shall glimpse 0space.
12. One shall also glimpse -2-space as dimension fold of 0-space.
13. Further one shall glimpse 0-space as dimension fold of 2-space.
14. One shall further glimpsed 0-space as dimension, 0-space as boundary, 0-space as domain, 0-space as origin and that 0-space creates 1-space as boundary, 2-space domain, 3-space origin.
15. It would be a blissful exercise to express oneself fully about above features of 0-space, 0-space contents and 0 as whole number and 0 as absolute value of nothingness distinct than one-ness.



ARITHMETIC, ALGEBRA, GEOMETRIC, MANIFESTATION and TRANSCENDENCE

1. Vedic Mathematics values may be chased as (I) Arithmetic values (II) Algebra (III) Geometric values (IV) Manifestation values (V) Transcendence values
2. Arithmetic values may be chased along algebraic format.
3. Algebra values may be chased along geometric format.
4. Geometric values may be chased may be manifestation format.
5. Manifestation values may be chased along transcendence format.
6. Artifices of number of, dimensional frame and valences may be availed as processing tools for chase of Vedic Mathematics domain.
7. These processing tools will help chased transcendence carriers along Sathapatya measuring rod format.
8. Sathapatya measuring rod format is settle by Ganita sutras values.
9. Ganita sutras values also permit there chased along Sathapatya measuring rod with it Vedic Mathematics become the mathematic of self-referral system who's begging and end is at the same Meant.
10. With it the transcendence carriers accept cyclic system.
11. This cyclic system unfolds sequentially.
12. This sequential unfolding value makes outward expansion at the boundary fold and inward expansion through transcendence within domain fold being of parallel features.
13. This is there as the domain boundary ratio of square and circle, as well as of cube and sphere, and in general of

- hypercube and hyper sphere being of common formulation: ($1^n: 2n^{bn-1}$, $n = 1, 2, 3, \dots$).
14. One may have pause here and take note the $n = 2$ the ratio $a^2 = 4$, b^1 as the domain boundary ratio for square and circle both.
 15. Likewise $n = 3$, $a^3 = 6b^2$ for both cube and sphere as hypercube 3 and hyper sphere 3.
 16. One may have pause here and take note that circle and sphere are having organization for circumference and area of the circle, as well as of surface area and volume of sphere in terms of radius.
 17. One may have further have a pause here and take note that the radius of half of diameter.
 18. Diameter as a synthetic setup of two halves (radii) is a feature which deserves to be comprehended well.
 19. This split of surface area of a circle in 4 quarters and split of boundary of square into 4 components are the feature which deserve to be comprehended well to have an insight and enlightenment about the outward expansion and inward expansion because of parallel split at boundary of square and of domain of a circle while domain boundary ratio remaining equal both cases of square and circle, both being the representative regular body of 2-space.
 20. Likewise or the feature of cube and sphere.
 21. In general or the value and feature of respective pair of hyper cubes and hyper spheres.
 22. One shall sit comfortable and permit the transcendence mind to glimpse and imbibe the feature and values of above organization format of hypercube circle and hyper spheres, particularly the split of diameter into pair of halves (radii/half diameters).

23. In reference to the centre (of circle /sphere/hyper sphere) pair of half diameters or of opposite orientations.
24. This feature of organization deserves to be comprehended well.
25. One may have further pause here and take note the organization of diameter as pair of half diameters is a setups of three point fixation for a pair radii setup of diameter.
26. This as such makes setup of 5 entities.
27. One may have paused here and taken note that this feature of organization as a format of 3 point fixation shall be available for the half diameter as well.
28. It also shall be leading us to triples $(-1, 0, +1)$ with $(+1) - (-1) = 2$ unit values.
29. One may have pause here and permit the transcendence mind to comprehend glimpse these feature well.
30. One may have further pause here and take note that zero values is the middle placement of the above organization $(-1, 0, +1)$
31. One may have further pause here and take note that the value sphere $(-1, 0)$ accept middle placement values as $(-1/2)$ while the value sphere $(0, +1)$ accept middle placement values $(+1/2)$ and the values sphere $(-1/2, +1/2)$ is of a unit values difference with values 0 of its middle placement.
32. This feature of 0 values placement as the middle vale placement for $(-1, +1)$ as well as of $(-1/2, +1/2, both)$ deserves to be comprehended well and to be fully imbibed.
33. This way the sequential organization would follow of as step $(-1, +1), (-1/2, +1/2), (-1/4, +1/4)$ and so on.

34. One shall sit compatibly and permit the transcendence mind to visit and re visit above phenomenon.
35. One may have paused here and take note that two point fixation of a line brings in triple entities setups while 3 point fixation of a line bring into 5 entities setup.
36. One may have pause here and to take note that 2 points fixation and 3 point fixation result into 3 entities setup and 5 entities setups.
37. One may have further pause here and take note that 2 points fixation and 3 point fixation is parallel to spatial order and solid order organization.
38. Further as that first perfect number (6) accepts 3 proper divisors (1, 2, 3) such that $1+2+3=6$ while second perfect number (28) accepts 5 proper divisors (1, 2, 4, 7, 14) with $1+2+4+7+14=28$.
39. One may have pause here and take note that number 3 is the biggest prime proper divisor of first perfect number while number 7 is the biggest prime proper divisor of second perfect number (28).
40. One may have further pause here and take note the values pair (3, 7) get coordinated as 3 space having 7 geometric range of signatures (-3, -2, -1, 0, 1, 2, 3).
41. One may further have pause here and take note Surya Ank (sun number) is '6'.
42. Further as that TCV of formulation Brahma is 28.
43. It would further blissful to take note that Vedic system chased sequentially in terms of 28 diameters which means the 0 values placement is accept at the middle for diameters of units of values. 1, $1/2$, $1/4$, $1/8$, $1/16$, $1/32$, $1/64$, $1/128$, $1/256$, $1/512$, $1/1024$, $1/2048$, $1/4096$, $1/8192$, $1/2^{27}$.

44. One may further pause here and take note that 'this will help comprehended and appreciate to a chase concentric circles of above units values diameters.
45. It would be blissful to chase a pair of semi circles by appropriate chasing of circumference of a circle as a set up of 27 units.
46. It would be further blissful to take note parallel chase would be permissible for both semi circles.
47. Also the parallel chase would be both hemispheres.
48. It is this chased which will help us have insight and have enlightenment about Vedic Mathematics systems processing values.
49. Twenty seven Nakshtras organization for chase of solar universe is the Vedic Mathematical apparatus.
50. Vedic system chased extended further as of the coverage range of third perfect number 496.
51. One may have pause here and take note that 3 perfect numbers (496) is accepting 9 proper divisors namely (1, 2, 4, 8, 16, 31, 62, 124, 248) with $1+2+4+8+16+31+62+124+248 = 496$.
52. One may have paused here and take note prime number 31 is the biggest prime proper divisor of 3 perfect numbers 496.
53. One may further have a pause here and take note that first triple perfect numbers are having respectively triple numbers of (3, 5, 9).
54. Further that the first triple perfect number having biggest proper prime divisor (3, 7, 31).
55. The triple prime (3, 7, 31) or of interconnected artifices as that 3-space as 7 geometric range parallel to which cube, the representative regular body of 3 space has 7 versions and cube is a structural set up of 31

- components namely (8 corner points 12 edges, 6 surfaces, 1 volume, 3 axes and one centre / origin).
56. The triple values (3, 5, 9) are of interconnect artifices as that ten place values system as nine numeral range of which numeral 5 is of middle placement and further numeral, is of middle placement of numeral range 1 to 5.
57. One shall sit comfortable and permit the transcendence mind to glimpse and imbibe above values and features and to chase arithmetic on algebraic format, algebraic on geometric format, geometric on manifestation format, manifestations on transcendence format, transcendence along Sathapatya measuring format, the Sathapatya measuring format to be settle by values of Ganita sutras and Ganita sutras may be chased along Sathapatya measuring rod format and there from the two sequential reach back to transcendence, manifestation, geometric, algebra and arithmetic.

VEDIC MATHEMATICS COURSE
(COUSES OF 4+1 YEARS DURATION)

ABOUT THIS COURSE

1. First four year of the courses is of learning steps.
2. Final year of the course is reserved for reglimpsing and fully imbibing of the values learnt during first four year of the course.
3. Fifth year is self learning year.
4. During fifth year one may not having a formal schooling.
5. During first four years there would be sequential institutionized teaching following the 'learning and teaching methology'.
6. Four years schooling is of the level of high and higher secondary classes. Education is phased as mathematics of 3-space, 4-space, 5-space and 6-space focus. During first, second, third and fourth year of the course.
7. Processing tools are artifices of numbers and dimensional frames.
8. Chase format is as of a Sathapatya measuring rod.
9. Text is of 'Ganita Sutras and Ganita Upsutras.
10. Pre knowledge expectation are two folds, firstly the skill of counting and secondly the acquaintance with Devnagri alphabet.
11. Aim of the course is to provide mathematical model for the existence phenomenon within our solar universe.

12. Beginning and end reach is going to be parallel to divya Ganga prava along the artifices of values of the components sole syllable Om.
 13. Emerging mathematical values during this course will settle bases base 3 space mathematics for 3 space technology, 4 space mathematics for 4 space technology, 5 space mathematics for 5 space technology and 6 space mathematics for 6 space technology. These values are lively within the Vedic literature is available with us.
 14. These are values are parallel to the Vedic values lively within rays of the sun as transcendental carriers.
 15. Glimpsing and imbibing of these values of transcendental carriers will perfect intelligence field within young minds.
 16. Perfection of intelligence is going to be one of the end fruit values of this course.
 17. Compressive view of the existence phenomenon of our solar universe is going to be bliss of this course.
 18. The unification of different values of knowledge as a single discipline of knowledge is going to be the another attainment of this course.
 19. Individual enlightenment is the ultimate bliss of the sadhkas under going this course.
 20. Fifth year of the course is going to be the year of bliss of enlightenment for the sadhkas. Successfully satisfaction is there indentify of urge to know more and more about existence phenomenon.
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TEACHER MANUAL CLASS IX**SECTION-2****CONTENTS**

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TEACHER MANUAL CLASS IX

SECTION-2

1

VEDIC MATHEMATICS LEARNING STEPS

34. Vedic Mathematics learning with Ganita sutras values is to be parallel to the organization of Ganita sutra themselves. To learn Vedic Mathematics parallel to organization of Ganita sutras, as such is the first values which shall be imbibed well.
35. This learning step may be taken as the basic learning foundation steps.
36. The begging of learning of this foundation is to be initiation values as that organization sequence is to be accepted as sacrosanct. Accepting this sacrosanct value, that way, becomes the second learning step of Vedic Mathematics.
37. To maintain the sanitary of sequential organization of Ganita sutras values would mean to approach these

- values by beginning with the first Ganita sutras and sequentially reaching at last Ganita sutras. This way, this chase beginning with first Ganita sutras and same to be continuing the sequential order Ganita sutras himself, becomes the third learning step.
38. The chase of value of first Ganita sutras is to begin it very first letter and there from , there is to be sequential reach of optical the last letter of Ganita sutra and thereafter chased is to have a fresh begging with the first letter of second Ganita sutra.
 39. This makes this as the fourth learning step
 40. These quadruple steps bring values of first letter of first Ganita sutra at the center of initiation focus. With this focus, the formal chase of values of mathematical domain of Ganita sutras begins.
 41. Begging like that makes values focus upon first letter of Ganita sutras as the fifth learning step.
 42. One may have pause here and take note that these five learning steps bring us face to face with the value domain and format of first letter (of first Ganita sutra)
 43. The values domain and format of this first letter (6 vowel make it of the feature and order of sixth vowel. The Vedic Mathematical domain chase in section with values and format of sixth vowel settle the sixth learning step.
 44. Sixth vowel values domain and format is of the feature and order of sixth dimensional space with in creative dimensional frame of sixth dimensions reach at sixth space with in creative dimensional frame of sixth dimensions sets the processing systems for its reach from first letter to second letter (of Ganita sutra one) this the seventh learning step

45. One may have pause here and take note that the seventh step as it is , of processing system takeoff from mathematical domain of first letter of Ganita sutra , the same , firstly leads for a reach to mathematical domain of second letter of Ganita sutra one .
46. Secondly, same also leads for a reach for Ganita sutra one.
47. Thirdly, it also leads for reach for Ganita sutra 2.
48. One may have paused here and to comprehend and imbibe this three folds reach of the seventh step. This comprehension and imbibing, it itself makes the eight learning step. The eight learning step, that way becomes a three folds value:
- (IV) Firstly, A reach from first letter to second letter of Ganita sutras.
- (V) Secondly, a reach from Ganita sutra from 1 from Ganita sutras 1.
- (VI) Thirdly, a reach from Ganita sutra 1 to Ganita sutra 2.
49. Mathematical domain of second letter of Ganita sutra 1 is of values and format of first Vargas consonant. Comprehended imbibing the value and format the first Vargas consonant and creator the space (4 space), in unified state of value 4 as 1, becomes the ninth learning step
50. The format of first Vargas consonant of 2 fold feature:
- (III) Firstly as that it is Vargas consonant, so of a square format and,
- (IV) Secondly as that it is of dimensional role.
51. One shall sit comfortable and permit the transcendence mind to glimpse and imbibe these features.

52. This glimpse and imbibing of this features makes the tenth learning step.
53. One may have further pause here and take note that this transition, reach and transformation from the mathematical domain of Ganita sutras 1 to mathematical domain of 2 letter of Ganita sutra 1 takes us from mathematical domain of 6-space to mathematical domain of 4-space.
54. Comprehension of this transition reach and transformation from 6-space to 4-space and their relationship internship as their 4-space as dimensions of 6-space get as the eleventh learning step.
55. One may have paused here and take note that the Lord Vishnu is over Lord of 6-space and Lord Brahma is over lord of 4-space.
56. Further as that, the Lord Vishnu is also the presiding deity of Sathapatya measuring rod, while Lord Brahma is presiding deity of measure the measuring rod.
57. This parallel range of values domains quardination of first and second letter of Ganita sutra 1, the one head, and of Sathapatya measuring rod and its measuring of other hand becomes the basic feature of processing system of Vedic Mathematics.
58. Learning about this relationship becomes the twelfth learning step. This further brings us to face to face with the quardination of mathematical domain of Ganita Up sutras 1 and Ganita up sutra 2, and of Ganita sutra 1 and Ganita sutra 2 learning this relationship makes thirteen learning step. The process of reach from first letter to second letter of Ganita sutra 1 on its continuity from letter 2 from letter 3 is the aspect , whose learning will bring us face to face with feature of reach from 6-space as domain as to 4 space as dimensions. This reach as

- such, is going to be a reach from domain (2 dimensions); a step head is going to be reach of parallel format as from dimensions (2) 'dimensions of dimension'. This is going to be 14th learning step with this give an attainment reach from letter 2 to letter 3 of Ganita sutra 1.
59. Further there would be parallel reach from Ganita sutra 2 to Ganita up sutra 2.
 60. Still further there also reach Ganita sutras 1 to Ganita up sutra 2
 61. Still further there reach from Ganita sutras 2 to Ganita sutra 3.
 62. This fifteen learning step comes to be fourth expect:
 - (V) Firstly, a reach from 2 letter from 3 letter of Ganita sutras 1.
 - (VI) Secondly from second Ganita sutra to second Ganita up sutra.
 - (VII) Thirdly from first Ganita sutras to secondly Ganita up sutra.
 - (VIII) Fourthly from second Ganita sutra to 3 Ganita up sutra.
 63. One may have pause here and take note that the phase and step of processing would also reach from second Ganita sutras to 1 Ganita sutra as well.
 64. This aspect of reach of this phase in stage as the Ganita as the sixteen learning step.
 65. One may have pause here and take note that this set of 16th learning steps will give us insight and enlightenment about the organization format of Ganita sutra and also about the feature of processing system of Vedic Mathematics of Ganita sutras.

66. One shall sit comfortably and to visit and re-visit above features and to comprehend and imbibed the same fully to acquire proper insight and appropriate enlightenment about the organization and progression system of mathematically domain of Ganita sutras.

2

CONCEPTUAL FORMULATION

8. Orthodox and classical words of English language being availed here accept number value formats. These values formats will help have insight about these words as mathematical formulations. Number value format of each letter of English alphabet (Roman script) is there as per the placement of the letter in the string beginning with first letter (A) and reaching up till last letter (Z) this string is of 26 step setup.
9. These 26 steps accept values (1 to 26) respectively parallel to it or associated values (1 to 26) to letter (A to Z) as per their sequence and order from (A to Z).
10. These values associated with individual letter and designated as their respective number value format(NVFs)
11. Precisely $NVF(A) = 1, NVF(B) = 2, NVF(C) = 3 \dots, NVF(X) = 24, NVF(Y) = 25, NVF(Z) = 26$.
12. NVF of word availing these letter is equal to sum of these availing individual letter
13. Illustratally $NVF(\text{word}) = (23+15+18+4) = 60 = (NVF=4), (NVF \text{ order})$.
14. It would be blissful exercise to glimpse and imbibe the values and features of the following continual form with the help of their respective and NVF:

S. no.	Word	NVF	Other Word	Other Word

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1.	A	1	-	-
2.	B	2	Aa	--
3.	C	3	Ab	Ba
4.	D	4	Aab	Bb
5.	E	5	Aac	Bc
6.	F	6	Abc	Aabb
7.	G	7	Be	Cd
8.	H	8	Ce	dd
9.	I	9	De	Ed
10.	J	10	Bag	Enlightenment
11.	K	11	Ja	Ib
12.	L	12		
13.	Order	60		
14.	Format	73		
15.	Feature	76		
16.	Value	61		
17.	Virtue	85		
18.	Glimpse	80		
19.	Imbibe	40		

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20.	Appreciate	94		
21.	Insight	105		
22.	Enlightenment	141		
23.	Full	51		
24.	Complete	89		
25.	Appropriate	126		
26.	Proper	88		
27.	Mathematics	112		
28.	Domain	56		
29.	Transcendental	150		
30.	Dimension	102		
31.	Boundary	100		
32.	Origin	72		
33.	Base	27		
34.	Manifestation	147		
35.	Layer	61		
36.	Range	45		

VEDIC ARITHMATIC

38. Vedic arithmetic is domain of arithmetic value and there processing systems of Ganita sutra (and upsutra).
39. Ganita sutras (and upsutras) are accepting Ganita sutra 1 being the source sutra and Ganita upsutra 1 being the source Ganita upsutra.
40. The sequential arrangement feature of Ganita sutra 1 and proportionality symmetry rule of Ganita upsutra 1 are the basic features of arrangement of organization format of mathematical domain of Arithmetic.
41. To have comprehensive view of organization of mathematical domain of Vedic arithmetic, one shall sequentially glimpse parallel to the sequential organization format of Ganita sutra (and upsutra) themselves.
42. The reach from Ganita sutra 1 to Ganita upsutra 2 and simultaneously reach from Ganita upsutra 1 to Ganita upsutra 2 and the further inter relationship of reach of Ganita sutra 1, Ganita upsutra 1, Ganita sutra 2, and of Ganita upsutra 2, provides us insight about the Vedic Mathematical system reach at value domain of arithmetic, as well as the way values of arithmetic help reach back at mathematical system and mathematical domain of Ganita sutras and upsutras themselves.
43. The reverse chase from value domain of arithmetic to Ganita sutra domain will help us appreciate that the whole range of values of domain of arithmetic, ultimately, gets centered around number value '1' and sequentially it unfolds up till number value 5, and then further.

44. The values domain of arithmetic, though is of sequential order of infinite sequence of infinite sequences but the same is formatted along whole numbers line, and same is worked as sequential strings of different units ranges, formatted along the whole number line which further formats surface.
45. This reach becomes the reach of algebraic format for arithmetic, geometric formats for algebra, manifestation formats for geometry and also of transcendental format for manifestations.
46. This chain even gets extended infinitely as value of the system of number value domain of arithmetic which further goes parallel to domains/framed as dimensional domain, permitting transcendence from domains at their origin and their by, there being a reach of base of origin and a step head to format of a base and still further having a reach at state of format itself.
47. This even gets transcendence further to natural sources of values lively within the Brahman reservoir of virtues, fulfilled with self-referral system of making existence phenomenon being blissful.
48. The pre-requisite for initiation of Vedic mathematical domain of arithmetic of number values are just two, first being 'counting' and second being the sitting of count along a line.
49. This pair of **pre-requisite** as well, gets restricted up till count 1 to5.
50. Counting up till 5 and reach their form as a reach of 5x1 to 5x5, become the basic pre requested of learning of Vedic arithmetic.
51. With this pre-requisite of 5x5, rest entire superstructure theirs upon Vedic arithmetic become a mental exercise.

52. The initial pre-requisite value as an up till 5×5 , as well is mental exercise.
53. As such Vedic mathematical domain of arithmetic is a mental mathematics domain.
54. In fact, the whole range of Vedic Mathematics is mental mathematics reach system.
55. Within mind is created intelligence field
56. Mind itself is value of brain.
57. Brain is a feature organ within head.
58. Head is a conjugative organ of human body sustained by human frame.
59. Therefore, the initiation learning, as well is teaching of Vedic Mathematics in general, and Vedic arithmetic, in particular is to avail human body sustained by human frame of which intimate presence is naturally available for the mind (of the Sadhakas as well as for the guru /for disciple as well as the master / for students as well as for teacher of Vedic Mathematics).
60. The pair of Vedic mathematical entities namely count and counting line, as well become just a mental construct pair.
61. With this, foundational comprehension, the chase a waiting for enlightenment of Vedic Mathematical domain of arithmetic is going to be a blissful lively experience of being face to face with the virtues of values of our existence phenomenon with our solar universe.
62. It would blissful to take note that value sequence (1, 2, 3, 4, 5, 6, 7, 8, 9, 10 ...), values wise is parallel to values sequence (1×1 , 1×2 , 1×3 , 1×4 , 1×5 , 1×6 , 1×7 , 1×8 , 1×9 , 1×10 ...).
63. One may have pause here and take note that though both above values sequences have same value at each

- step but, otherwise as it **evident**, both the sequences are fundamentally different at their organization formats as much as that the first sequence permits plotting along a line while the second sequence may avail for its plotting along a surface (having length and breadth).
64. Therefore to appreciate the arithmetic of first sequence and of second sequence, 1 is also to keep in mind there plotting format as well, which in 1st case of linear feature, while the 2nd is of spatial feature.
 65. Further, the second sequence may have arrangement format for itself as plotting of value along first axis, as well as along second axis.
 66. This shall be leading us to diagonal plotting as of value sequence: [(1, 1), (2, 2), (3, 3)...].
 67. Here the pairing (1, 1)(2, 2)(3, 3) and so on may lead to different sequential strings like (1+1, 2+2, 3+3), (1x1, 2x2, 3x3) and so on .
 68. Of these the value sequence (1², 2², 3²) will make diagonal on which these values plotted, being of a spatial spread format.
 69. A reach in terms of pair (N-2) and (N²-2), along line (axis) and along diagonal (of spatial format) will lead us to different attainment.
 70. The quadination (N²-2) = [(N+N-2) + (NxN-2)] will help us see the interrelationship of pair of attainment.
 71. Like that Vedic arithmetic works out and attains different attainments.
N=5 leads us to (5²-2) = (3+5+3x5).
 72. This value equation goes parallel to dynamic state of framed transcendental domain creating a spatial order for its linear order for its dimension of dimensions.
 73. This reach is of chase of arithmetic of algebraic format and ahead algebraic format itself availing geometric

format. This will lead to artifices of numbers running parallel to dimensional frame.

74. It is this reach at dimensions of dimension level (a casual state) of our existence phenomenon which deserve to be glimpse and imbibed as insight of Vedic systems.

ARITHMETIC ON ALGEBRAIC FORMAT

43. Ganita sutra 1 provides working rule 'one more than before'.
44. This working rule help set counts along a line.
45. This line would be as long as are number of count set upon it.
46. This counts lines is of infinite length feature as there are infinite counts.
47. Ganita upsutra 1 provides working rule of 'proportionate'.
48. This rule arguments working rule of Ganita sutra 1.
49. Ganita sutra 1 and Ganita upsutra 1 together lead to a working rule of units of different values inter-related with each other.
50. Illustratively unit of value 1 and unit of value 2 are 'proportionate in reference to each other'.
51. The values range with unit as value 1, gives rise to counts sequence of values (1, 2, 3, 4, 5, 6 ...) and unit count as of value 2 will give rise to count value sequence (2, 4, 6, 8, 10 ...).
52. Like that unit as value n shall be leading to unit values sequence of counts as ($N, 2N, 3N, 4N \dots$).
53. These all counts sequences are of infinite lines setups.
54. Ganita sutra 2 gives us a working rule 'all from 9 and last from 10', and the same settles ten place value system which avails 9 numerals and 10 as place value. The infinite unit length, as such gets organized as, of 10 counts folds.
55. Here though the folds are going to be infinite in number but each fold remain of 10 count range.

56. The rule of symmetry of Ganita upsutra 1 brings in placement value system for each count like count 10.
57. There is going to be a relationship between folds lengths of every pair of place value system.
58. The fold being of unequal length, and as such the portion of length of larger fold from that of the length of smaller fold, as such, is taken care of by the working rule of Ganita upsutra 2 specific designation for the above difference as 'REMAINDER'. Precisely 'that remain is Remainder', is the working value of the rule of Ganita upsutra 1.
59. Vedic arithmetic simultaneously avails, as a general rule, of 10 placement and 5 place value system.
60. The reach $10 = 5+5$ and reach for count five as of five steps (1, 2, 3, 4, 5) and reach of 10 as well, as of five steps (2, 4, 6, 8, 10), that way focuses upon simultaneously working with a pair of place value system, here being ten value system and 5 place value system.
61. Geometric format for algebra takes us to the format of hypercube 5 whose domain boundary ratio is $a^5:10b^4$.
62. The creative boundary of hypercube 5 is of 10 components and the same makes a format for 10 place value system.
63. Domain fold of hypercube 5 is a manifested domain of 5-space content and same make a 5 place value format.
64. The value 10 with its organization as $10 = 4+6$, leads to 4×6 grid format which accommodate all the 24 double digit numbers of 5 placed value system.
65. These features deserves to comprehended well to have insight of Vedic arithmetic processing system of simultaneously chase in terms of ten place value system and 5 placed value system along the format of hypercube 5.

66. One may have pause here and glimpse number value (5), 5 placed value system and 5 space domain.
67. One shall further glimpse number value 10, 4-space boundary of 10 components of 5-space and 10 place value system.
68. One shall further simultaneously glimpse number value 5 and number value 10, 5-space domain and its boundary, and 5 place value and 10 place value system.
69. The general algebraic format, parallel to place value format for number value comes to be , as follow:
($A+Bx^1+Cx^2+Dx^3+Ex^4+Fx^5 \dots$).
70. The value of x is equal to place value of the system.
71. For ten place value system $X = 10$.
72. For five place value system $X = 5$.
73. Therefore the conversion from ten place system to five value system and vice versa would be reach at, in terms of place value of the respective system.
74. Here in case of ten place value system and five value system, inter-relationship of place value is of feature (10:5).
75. It is like 2 as 1 and 1 as 2 features.
76. This feature is too availed to reach from one place value system to another place value system.
77. It would be blissful to visit and revisit algebraic format approach for place value organization of number value.
78. Vedic system approach number values arithmetic along algebraic format parallel to concerned place value system.
79. As number value can be organized along every place value system, as such parallel algebraic format are available for every number value.
80. It is this feature which makes simultaneously availability of many approaches for values of numbers.

81. It is this richness of Vedic Arithmetic systems, which deserve to be comprehended well and same is to be imbibed fully.
82. This will help firstly to have smooth transition from arithmetic to algebraic and back to algebraic to arithmetic, and a step head from arithmetic to algebraic to geometric and back from geometric to algebraic to arithmetic.
83. Still further reach can be up till manifestation, transcendence and even beyond parallel to and in terms of values of numbers.
84. As such the chase of Vedic arithmetic is of very large domain, parallel to the domain of Vedic Mathematics itself.

5

NUMBER VALUE 5 AS NUMERAL

10. Ten place values system has range of nine numerals.
11. Numeral five is of middle placement of nine numerals range (1, 2, 3, 4, 5, 6, 7, 8, 9).
12. Six space has five numeral range (1, 2, 3, 4, 5), with numeral 3 at its middle placement.
13. Four place values system has 3 numeral ranges (1, 2, 3,) with numeral 2 at its middle placement.
14. Values triple (9, 6, 4,) is unique values triple as that it accept reorganization as $(3^2, 3 \times 2, 2^2)$.
15. Further as that $9 = (6 \times 3 / 2)$ and $6 = (4 \times 3 / 2)$.
16. Still further as that the square is structural setup of 9 components.
17. Synthesis of two squares is of value $(9+6)$.
18. Synthesis of second row of two squares is of value $(6+4)$.

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VEDIC MATHEMATICS

TEACHER MANUAL CLASS IX

SECTION-3

VM TEXT BOOKS PROJECT

1. Vedic Mathematics is an Ancient Wisdom Discipline.
2. For, some historic reasons, this Discipline of Knowledge had gone dormant.
3. Fortunately, since middle onwards of 19th century there has been a fresh revival step for this discipline of knowledge.
4. Practically, half century effort of Swami Bharti Krishna Saraswati, Shankracharya and half century their after, till date, there has been efforts going on for glimpsing and imbibing of the values of this Discipline of Ancient Wisdom.

5. By this time, there has been awareness and appreciation in western world about values of Vedic Mathematics, primarily because of dedicated pursuit by Kenneth Ronald Williams and his team, of about four decades.
6. With all humbleness, I may add that I am also devoted for this cause since 1967 and I full convinced that this Ancient Wisdom discipline of knowledge deserves to be introduced as main stream subjects at of levels of schooling.
7. I sincerely feel that, with flow of time over this century there has been a change in technology and processing methodologies.
8. This being so, there is a need to reach at properly phased and graded text books and Teachers Manuals.
9. In the light of my studies and research in this domain, in my opinion, we may reach at text books of Vedic Mathematics for high and higher secondary classes with following features.
10. During high and higher secondary stages classes spreading over four year duration, as the same is phased as graded four year schooling as class (ix), class (x), class (xi) and class (xii), as such Vedic Mathematics text books as well shall be of sequential continuity.
11. With this aim, I am drawing the outline of the subject content to be touch for learning and teaching during these four years.
12. The following tables outline the features coverage during respective year of classes 9, 10, 11, 12.

S. no.	Class (ix)	Class (x)	Class (xi)	Class (xii)
.				

1	3-space	4-space	5-space	6-space
2	Cube	Hypercube 4	Hypercube 5	Hypercube 6
3	Arithmetic	Algebra	geometric	Manifestation
4.	Algebraic format	Geometric format	Manifestation format	Transcendence format
5.	Sutras 1,2	Sutras 3,4,5,6,7	Sutras 8,9,10,11	Sutras 12,13,14,15, 16
6	Upsutras 1 and 2	Upsutras 3 to 9	Upsutras 10 and 11	Upsutras 12 and 13
7.	Mind	Intelligence	Consciousness	Absolute
8.	Sankhya nishta	Yoga nishta	Vaisheshik	Nyaya
9.	Mathematics	Sciences	Technology	Existence phenomenon
10	Vaishatana m	Yavadunam tavadunam	Lopnasthapa na	Vilokanam
11	Organization	Formats	systems	Processing
12	Number 2	Number 5	Number 9	Number 14
13.	Artifices	Dimension	Sound	Light

14.	Intelligence field	Consciousness field	Natural field	Absolute state
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13. To reach at Vedic Mathematics texts books for classes 9, 10, 11 and 12, with above outline of phased mathematical domain, is a challenging project.
14. I am daring to take up the challenge of this project with hope that surely some others dedicated souls will jay me.
15. Challenging this project is but the same is attainable as Ancient Wisdom of this Discipline of knowledge is already available with us though in a classical form, and all that is to be done is simply to put up on a language friendly with the present times approach techniques , technologies and methodologies.
16. Let Noble thought flow in blissfully.

Date 25-3-17
S.K.Kapoor

Dr.

(Ved-Ratan)

**VEDIC MATHEMATICS
TEXT BOOK
CLASS IX**

Broad outline:

1. As broad outline of this year course, it may stated that it is about learning and imbibing the value of 3 space.
2. The focus during this year is to be upon mathematics of linear order measure of chase of mathematical domain of 3 space formats.

Two sections:

1. This year course is being divided into a pair of sections, first of which is devoted to arithmetic on algebraic format.
2. The second section is devoted to learning and imbibing the values of setup of cube as hypercube 3.

Source sutras and upsutras:

1. The focus of this year is upon Ganita sutra 1, 2 and upon sutras 1, 2.
2. Ganita sutra 1 is the source sutra and Ganita upsutra 1 is source upsutra.

Initial steps:

1. First initial step is going to be acquainted oneself with counts and bodies as the pair of basic mathematical entities.
2. For it, alt of counting and of plotting counts along a line may be taken as the pre-requisites.

Firm comprehension:

1. To test one's firmness of comprehension of counts and bodies, one shall expose to the abstract counts and physical bodies and to have their association with each other.
2. One shall plot points, draw lines; makes crave and outline bodies with the help of points and lines on surface as a spread sheet.
3. To dissipate firmness, one may take help of symbols (of letters) and of colors.
4. Sequentially one shall reach at square and circle, as well as, at cube and sphere.

Reach at 5x5:

1. One shall further reach at 5x5 as a grid.
2. One shall reach at counts 1 to 25.
3. One shall arrange 25 counts as 25 entities, may these entities be counts are bodies.
4. These entities may be identical or of different features and values.
5. The abstractness of counts and physical features of bodies, both as values be glimpsed and imbibed to evaluate one's firmness of comprehension of these mathematical values.
6. It be taken that this glimpsing and imbibing is a mental activity, and the same gets in printed in one's intelligence field.
7. Such in prints within intelligence field manifest mental state.

Innocence and mental state:

1. Intelligence field in its natural state is designated as affine innocence format of intelligence.
2. The subsequent imprints on above format make a mental state format for intelligence.
3. This being so , Vedic Mathematics teachers and parents of young minds (noble souls) are under solemn duty to ensure that learning during teaching does not causes scratch upon innocence other than what is to be imprinted their in as $NVF(\text{mind}) = NVF(\text{line})$ and $NVF(\text{point}) = NVF(\text{one line}) = NVF(\text{pairing}) = NVF(\text{A Format})$.

Counting and hypercube:

1. $NVF(\text{counting}) = NVF(\text{hypercube})$.
2. $NVF(\text{interval}) = NVF(\text{ultimate}) = NVF(\text{division})$.

Numeral value format (NVF):

1. $NVF(A) = 1, NVF(B) = 2, NVF(C) = 3 \dots, NVF(X) = 24, NVF(Y) = 25$ and $NVF(Z) = 26$.
2. $NVF(GOD) = NVF(G) + NVF(O) + NVF(D) = 7+15+4 = 26 = NVF(Z)$.

Transcendental code value (TCV):

1. Each letter of Devnagri alphabet accepts transcendental code value.
2. There are nine vowels and these sequentially accept TCV values 1, 2, 3, 4, 5, 6, 7, 8, 9.
3. There are 25 Vargas consonants organized as 5x5 and these accepts TCV values as follows:

1	2	3	4	5
2	3	4	5	6

34	5	6	7
45	6	7	8
56	7	8	9

4. There are four Antstha letters which accepts TCV values (1, 3, 5, 7) respectively.
5. There are four Ushmna letters which accepts transcendental code value (2, 3, 6, 9,) respectively.
6. There are 8 Yama letters which accepts TCV values (9, 10, 11, 12, 13, 14, 15, 16) respectively.

Vedic code value:

1. Devnagri alphabetic letter (consonants-Varga, Antstha and Ushmna letter) accepts Vedic codes values as follows:

1	2	3	4	5
6	7	8	9	0
1	2	3	4	5
6	7	8	9	0
1	2	3	4	5
1	2	3	4	
5	6	7	8	

Ganita sutras and upsutras:

1. Text is in Devnagri script.
2. TCV value and VCV values of this text leads us to values of mathematical domain of Ganita sutras and upsutras.

Blissful exercise:

1. It would be blissful exercise memories the text of Ganita sutras and upsutras which are 16 and 13, availing just 519 letters.
2. To reach at TCV and VCV values for the texts of Ganita sutras 1 and 2 and also of Ganita upsutras 1 and 2.

SECTION 1

ARITHMETIC CHASE ALONG ALGEBRAIC FORMAT

INDEX

1. **Ganita sutras 1, 2 and Ganita upsutras 1, 2.**
2. **Algebraic Format Parallel To Organization Along Ten Place Value System**

LESSON 1
GANITA SUTRAS 1, 2 AND
GANITA UPSUTRAS 1, 2

TEXT OF SUTRAS

1. The text of Ganita sutras 1, 2 and Ganita Upsutras 1, 2.
2. Read the text of Ganita sutras 1, 2 and of Ganita Upsutras 1, 2.
3. Tabulate letter wise the text of Ganita sutras 1, 2 and Ganita Upsutras 1, 2.
4. Comprehend the working rules of Ganita Sutras 1, 2 and Ganita Upsutras 1, 2.
5. One way to comprehend and to imbibe the value of these Sutras and Upsutras is to be through these sutras , in following sequence steps:
 - i. Ganita Sutra 1.
 - ii. Ganita Upsutra 1.
 - iii. Ganita Sutra 2.
 - iv. Ganita Upsutra 2.
6. One shall sit comfortably and permit the transcending mind to sequentially glimpse and imbibe the working rules of Ganita Sutras 1, 2 and Ganita Upsutras 1, 2 in the above sequence.
7. The glimpsing is to begin with working rule of Ganita Sutra 1.
8. At next step, working rule of Ganita Upsutra 1 be glimpsed and to be imbibed.
9. Thereafter, one shall glimpse and imbibe the working rule of Ganita Sutra 1 and Ganita Upsutra 1 together.
10. For firm comprehension of working rule of Ganita Sutras 1 and Ganita Upsutra 1, one shall take up exercises of application of their working rule.

11. There after one shall glimpse and imbibe the working rule of Ganita Sutra 2.
12. There after one shall glimpse and imbibe the working rule of Ganita Upsutra 2.
13. One may have pause here and to re-visit the working rules of Ganita Sutra 2 and Ganita Upsutra 2 together.
14. For firm comprehension and appreciation of the working rule of Ganita sutra 2 and Ganita Upsutra 2, one shall take up concrete illustrations of application of these rules.
15. One shall further reach from Ganita Upsutra 1 to Ganita Upsutra 2.
16. This way one shall be having comprehensive of application of working rule of Ganita Sutras 1, 2 and Ganita Upsutra 1, 2.
17. With it one may be having an idea of mathematical domain of Ganita Sutras 1 and 2 and Ganita Upsutras 1 and 2.
18. One shall sit comfortably and permit the transcending mind to continually remain in prolonged sitting of Trans and visit and revisit Ganita Sutras 1, 2 and Ganita Upsutras 1, 2. The focus here, during this chase, it to be upon the arithmetic operations for number (values).
19. The availability algebraic format for the numbers values organized in place value systems is the basic value, at the same to be comprehended well.
20. It is comprehension imbibing of these features which will facilitate arithmetic operation.
21. It would be blissful to take note that every number (value) permits its organization along different place value system, and with it comes to surface the richness of Vedic Mathematics and its processing systems.

LESSON 2

**ALGEBRAIC FORMAT PARALLEL TO ORGANIZATION
ALONG
TEN PLACE VALUE SYSTEM**

1. Let $x = 10$.
2. $N = (a+bx^1+cx^2+dx^3+...)$ Will be the expression for number n along ten place value system upon parallel geometric format, with $(a, b, c, d ...)$ to be the values of numeral range 1 to 9 and placement value 0.
3. It would be blissful exercise to reach at values for $(a, b, c, d ...)$ for number value 1000 along above algebraic format.

TSS

VEDIC MATHEMATICS
TEACHER MANUAL CLASS IX

SECTION-4

CONTENTS

1. Ganita Sutras system	2 to 7
2. Ganita Sutra 1	
(I) Glimpsing mathematical domain of Ganita Sutras	8 to 12
(II) Hypercube 6 format 15	13 to
(III) Transition from last letter of first formulation to first letter of second formulation	16 to 18

1.

SECTION-1

INTRODUCTORY

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1

GANITA SUTRAS SYSTEM

1. Ganita Sutras systems are self-referral.
2. Being self-referral, these systems unfold from within.
3. Sutras are to be read and to be understood in term of Sutras himself.
4. Sutra one unfolds in terms of its own values.
5. And in terms of sutras values one, as well unfold of the Sutras.
6. Sutras sequentially unfold parallel to the sequential composition of text Ganita sutras as itself.
7. Ganita sutras 1 text avails 16 letters.
8. There are 16 sutras.

9. 16 letter of text of Ganita sutras 1 carry the structural key of mathematical domain of Ganita sutras 1 to 16.
10. First letter of the text Ganita sutra 1 carries the structural key of mathematical domain of Ganita sutras 1 and further of the entire mathematical domain of all the 16 Ganita sutras.
11. First letter of the text of Ganita sutras is the sixth vowel. It as such brings us face to face number values 6 as well as the geometric format of 6th vowel.
12. This takes us to 6-space.
13. Further to artifices of number values 6 and parallel to dimensional frame of 6-space.
14. 6 space as 13 geometric ranges.
15. Accordingly is the coverage for 13 Ganita up sutras.
16. This makes us a total range of 16 Ganita sutras and 13 Ganita up sutras
17. This range us to take us to number value 29.
18. Number value 29 is parallel to transcendence code value 29.
19. It would be blissful to take note the formation Brahma accept transcendence code value 29.
20. Further as that dimensional domains split spectrums at forth step take us to spectra of 29 entities.
21. Lord Brahma is the over lord of real 4-space.
22. Lord Vishnu is the over lord of real 6-space.
23. Lord Vishnu is the presiding Deity of Sathapatya measuring rod of 6-space domain.
24. Lord Brahma is the presiding Diety of the measuring rod of Sathapatya of 6 space domain.

25. It would be take note that the second letter of text of Ganita sutras 1 is the first verge consonant 'ka', which means of geometric format of spatial order 4-space.
26. The 3 letter of text of Ganita sutra 1 is elongated first vowel.
27. Like that the mathematical domain of Ganita sutras 1 and parallel to it Ganita sutras and up sutras start unfolding.
28. To begin with, the working rule of 'one more than before' of Ganita sutra one is the organization system of number values domain.
29. This organization accepts place values arrangement bases as is the system Ganita sutra 2: 'All from nine and last from ten', which is of the values of ten place value systems.
30. The organization of number values along the ten placed value system, and in general along any place value system provides a algebraic format of 'arrangement of place value system itself'.
31. As such Ganita sutras system approach arithmetic operation along geometric format.
32. Ganita sutras 3: "vertically cross wise" is a geometric format of chased along with a geometric format plane.
33. This takes us to approach for algebraic operations and relationship equations along a geometric format.
34. One may have pause here and take note that the emerging values are that Vedic systems work out arithmetic operation along geometric format while

- algebraic operation themselves are being approached along geometric format.
35. Step head, Ganita sutras 4 takes to manifestation formats for the chase of geometric format themselves. By folding 2nd half and superimposing it upon the first off.
 36. A setup head, Ganita sutras 5 provides transcendence format by attaining zero value with superimposition of one half upon the other and making a parallel flow for equal coverage by a pair of streams.
 37. Still a step head Ganita sutras 6 makes self referral format for the transcendence flow.
 38. Ganita sutra 7 provides unity state for the self-referral systems permitting simenaltieously manifestation, transcendence and re-manifestation.
 39. This ultimately the format the Ganita sutras 8 takes us to Ganita sutras of Asth Prkriti (8 space format)
 40. Ganita up sutras provides us Brahman format (9-space format).
 41. Hence forth the reverse process of reach along 7-space as dimension of 9-space comes into play. This way Vedic Mathematics system sequential approach mathematics domain and one is to leaner teach young mind in a sequential gentle steps of:
 - (I) Arithmetic operation along algebraic format of value 10 as a placement value variable powers and numerals 1 to 9 and placement value 0 as coefficients.

- (II) Algebraic operations to be worked out along geometric format of boundary folds of hyper cubes, being the geometric format for the placed value system of respective order.
 - (III) Geometric features to be chased along the manifestation format of hyper cubes of different dimensional orders created by boundary components strip off from the boundary of hyper cubes.
 - (IV) Manifestations (as domain folds created by boundary fold components) to be chased as transcendence phenomenon happening within the domain fold through its origin fold for reach up till the base fold.
 - (V) Transcendence phenomenon to be followed as a self-referral phenomenon sustaining as origin folds along the format of origin format.
 - (VI) Self-referral system of sustains of transcendence is the unity state phenomenon.
 - (VII) A head is 8 fold natures.
 - (VIII) Further head is Brahman domain.
42. One shall sit comfortably and permit the transcendence mind to sequentially glimpse and imbibe the values of above sequential chased setup of Vedic Mathematics system of Ganita sutras.
43. Ganita up sutras values bridges the gaps in between the sequential mathematical domain of Ganita up sutras.

44. Ganita up sutras bridge the gaps of mathematics domain of individual Ganita sutras.
45. Ganita sutra and up sutras complement and supplement the mathematical domain of Vedic Mathematics.

GANITA SUTRA 1

(I)

GLIMPSING MATHEMATICAL DOMAIN OF GANITA SUTRAS

1. To glimpses Mathematics domain Ganita sutra, one shall began with the value of Ganita sutra 1.
2. Organization of mathematical domain of Ganita sutras is self-referral and Mathematical domain unfold itself from within. It means that Ganita sutras are to red for its value in terms of the values of Ganita sutras themselves. The sequential reach of text of Ganita sutras 1, while the one hand the sequential unfolding of text of Ganita sutra 1 leads to values of Mathematical domain of Ganita sutra 1, and the other hand it also sequential unfold the Mathematical domain of whole range of first to the last Ganita sutra.
3. This feature, as it is, is of 16 steps, parallel to 16 letter of text of Ganita sutra 1, parallel to which sequentially unfold to Ganita sutra 1.
4. To be specific the first letter is the structural keys of Ganita sutra 1, while second letter of Ganita sutra 1 is the structural keys of Ganita sutra 2.
5. Likewise, sequentially letters number 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16 preserve the

- structural key of Ganita sutra 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15 and 16 respectively.
6. The sequential reach from first letter to second letter of Ganita sutra 1 parallel takes from the Mathematical domain of Ganita sutra to Mathematical domain of Ganita sutra 2.
 7. Further, parallel to it there emerges a reach from Ganita sutras 1 to Ganita up sutra 1.
 8. Also, Ganita up sutra 1 fill the gap between Mathematical domain of Ganita sutra 1 and Ganita sutra 2.
 9. The organization of Ganita up sutra 1 sequentially unfolds the mathematical domains of Ganita up sutras 1 to 13.
 10. One must have pause here and take note of text of Ganita sutra 1 avails just ten letter while there are 13 Ganita up sutras.
 11. The range of 16 Ganita sutras has 15 gaps in all. The range of 16 Ganita Sutras, organizationally accept organization arrangement, as of first range of Ganita sutras 1 to 8, and of second half being of the range of Ganita sutras 9 to 16, as well is of seven gaps.
 12. This division make available $7+7 = 14$ gaps.
 13. Further Ganita sutras 15 and 16 as well of equal number of letters and the text of Ganita up sutra 13 is equal to total number of letter of Ganita sutra 15 and 16. This gives rise to organization feature whereby there remain no need for specific structural feeling in between Ganita sutra 15 and 16.

14. In the light of above the first half seven gaps and second half six gaps together make a total range of 13 gaps, which are filled by 13 Ganita up sutras.
15. One may have pause here and take note that Ganita sutras 8, 9 are of 16 letters each.
16. Moreover, Ganita sutra 1 and Ganita sutra 8 are of 16 letters text and further Ganita sutra 9 and Ganita sutra 16 as well are of 16 letters text.
17. These features not only make dully filled up first half and second half ranges, but also the gaps between Ganita sutras 8 and 9 no more requires bridging in between.
18. One may have pause here and take note that Ganita up sutra 1 fill up the gap between Ganita sutra 1 and Ganita sutra 2.
19. The gap between the Ganita sutra 2 and Ganita sutra 3 is filled by Ganita sutra 2.
20. Likewise sequentially Ganita up sutra 1 to 7 fill the 7 gaps between Ganita sutra 1 and Ganita sutra 8.
21. Further Ganita sutras 8 to 13 fill six gaps between Ganita sutra 9 and Ganita sutra 15.
22. One shall sit comfortably and permitted the transcending mind to glimpse and imbibe the feature of integrated range of Mathematical domain of Ganita sutras and up sutra.
23. Approaching along this integrated format, one shall sequential reach in $16+13 = 29$ steps for full chase of entire mathematical domain of Ganita sutra and up sutras.

24. One may have pause here and take note that text of Ganita sutras 1 to 16, accepts 16 letter texts for Ganita sutras 1, 8, 9, 15, 16.
25. Further Ganita up sutra 10 as well accept 16 letter texts while Ganita up sutra 13 accepts $16+16 = 32$ letter text.
26. These texts of 16 letters and of 32 letters or of specific placements.
27. One may have pause here and take note that Ganita up sutra 10 is the placement between Ganita sutras 11 and 12.
28. This placement together with the placement of Ganita up sutra 13 followed by Ganita sutras 15, 16, deserve to be comprehended well for their placement and structural role in the organization for mathematical domain of Ganita sutras and up sutra together.
29. While chase in terms of structural keys persevered by letter of text of Ganita sutra 1. One shall have special focus in respect of the above placement, in particular, in the integrated domain of Ganita sutra and up sutra.
30. Of these, Ganita sutra 1 and 8 are of end placement for the first half.
31. Ganita sutra 9 and 16 are of end placement of second half.
32. With it the organization string of 16 steps is the basic feature.
33. Number value 16, that way comes at the centre of the organization arrangement.

34. Number value 16 accepts re-organization as $16 = 5+6+5$.
35. Number value 13 accepts re-organization as $13 = 4+5+4$.
36. This takes us to pair of number value (6, 5) and parallel to it 6 space and 5 space and still further, 6-space as domain and 5-space boundary. Of hypercube-6 as of the basic organization format features of mathematical domain of Ganita Sutras.
37. This being so, chase of Ganita Sutras, in general and of Ganita Sutras particular, is to be along the geometric format of hypercube 6.
38. Text of Ganita Sutras one is a composition of pair of formulations and both respectively deserved chased along six space domain and 5 space boundary.

(II)
HYPERCUBE 6 FORMAT

1. Text of Ganita Sutra 1 is a composition of a pair of words.
2. This pair of words is a pair of formulations.
3. First word formulation is composition of 9 letters.
4. Second word formulation is composition of 7 letters.
5. The 9 letter of first formulation accepts transcendental code value (6, 4, 2, 7, 2, 4, 6, 8, 1).
6. 7 letter of second formulation accepts transcendental code values [5, 6, 7, (6+2), (7+2), (8+2)].
7. The value range of first formulation accepts parabolic format (6, 4, 2, 7, 2, 4, 6, ----).
8. The extension of second limb of parabolic format extends ahead as of values (6, 8, 1).
9. One may have pause here and take note that the 9th letter of first formulation accepts transcendental code value (1).
10. These values for the ninth letter, within 6-space domains, bring us face to face with the reach for value (1) as a unit of (6 space domain).
11. Being a unit of 6 space domain is as 6 as 1 value.
12. Further as that 6-space placed the role of dimensions of 8-space with 9-space origin.
13. Still further, it would also, to take relevant note that 6 space dimension is co-ordinate with 6 space origin.
14. It would also to be relevant to take note that 9-space has 7-space in the role of dimensions.

15. One may have pause here and take note that value 7 is the vertex of the parabolic format curve set up of above range of TCV values of nine letter of first formulation.
16. One may have pause here and take note that 7 step long range of transcendental code value of 7 letter of second formulation which come to be a string of value (5, 6, 7, 8, 9, 10) and same as such bring us face to face with triple value sequence (5, 6, 7) which with 6 as the middle value, shall be permitted transcendence within as of transcendental code value sequence (8, 9, 10).
17. One may have pause here and take note that first formulation had brought to us face to face with extension of second limb of parabolic format curve [6, 8, 1, (9)].
18. The second formulation, firstly accept a sequential progression as (5, 6, 7, 8, 9, 10) and same also accepts extension with transcendence at middle of values range (5, 6, 7) as (8, 9, 10).
19. One may have pause here and take note that third letter (RAIF) of transcendental code value '2' gets sequential placements at 5, 6 and placement.
20. It is this feature which deserves to be comprehended well.
21. It is this feature which helps us comprehend and imbibe the structural flow at transcendental boundary of self-referral domain.
22. One shall sit comfortably and permit the transcending mind to glimpse and imbibe the values

of first and second formulation of the text of Ganita Sutra 1 as an integrated mathematical domain along format of hypercube 6.

(III)

**TRANSITION FROM LAST LETTER OF FIRST
FORMULATION TO FIRST LETTER OF
SECOND FORMULATION**

1. The last letters of first formulation of text of Ganita Sutra 1 accept transcendence code value '1'.
2. The first letter of second formulation of the text of Ganita Sutra 1 accepts transcendental code value '5'.
3. The value $1+5 = 6$ and $1 \times 5 = 5$.
4. One may have pause here and take note that this values pair, on its chase will help us to transition from first formulation to the second formulation.
5. One may have pause here and take note that $6 = 1+5$ is addition operation takes us to domain fold, while $5 = 1 \times 5$ takes of boundary fold.
6. This transition is from 6 space domain to 5 space boundary.
7. One may have further pause here and take note that 5-space place the role of boundary 6-space and 6-space place the role of origin of 5-space.
8. Further, as that, 5-space place the role of dimension of 7-space, while 7-space placed the role of 5-space origin.
9. One shall sit comfortably and permit the transcendence mind to continuously remain the prolonged chasing and to comprehend and imbibe the values of transcendence phenomenon at origin of domain.

10. One may have further pause here and take note that origin fold is of higher dimensional order than that of domain fold.
11. As such transcendence form the order domain fold through origin fold for the reach of base fold accepts the middle value of the dimensional orders values of domain fold and that of origin fold.
12. One may have further pause here and take note that transcendence takes values as of middle of value N and $N+1$.
13. One may have pause here and take note that, this way of range of value (1, 2, 4, 5, 6...) shall be transition and forming the as a range of value (1, 1.5, 2, 2.5, 3, 3.5, 4, 4.5, 5.....).
14. As such the transition from first formulation to second formulation beginning with value 1, 5 shall be taking sequential at value [(6x1.5=9), (7x2=14), (8x2.5=20), (9x3=27), (10x3.5=35)....]
15. The transformed values range (5, 9, 14, 20, 27, 35 ...) accepts reorganization (2+3, 2+3+4, 2+3+4+5, 2+3+4+5+6, 2+3+4+5+6+7, 2+3+4+5+6+7+8).
16. One may have paused here and take note that this organization is parallel to synthesis value of (4, 5, 6, 7, 8) numbers of linear dimensions of equal number of spatial dimensions.
17. One shall sit comfortable and permit the transcendence mind to continuously remain prolonged sitting of Trans and to glimpse and

imbibe the above feature reach for first and second formulation of text of Ganita Sutra 1.

18. One shall visit and re-visit the above the organization format features of the Ganita Sutra 1 and to face to face with emerging mathematical domain and mathematical processing systems of mathematics of Ganita Sutras.

SECTION-5

VEDIC MATHEMATICS

TEACHER MANUAL CLASS X

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to be transcended
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SECTION-5
VEDIC MATHEMATICS
TEACHER MANUAL CLASS X

File 27 27-3-17

1

MATHEMATICS OF SPATIAL ORDER

(I)

**RESTRICTIONS OF LINEAR ORDER TO BE
TRANSCENDED**

1. When space is approached within a dimensional frame of three to linear dimensions, it makes 3-space (setup).
2. 3-space (setup) is of restrictions and potentialities of a linear order of its dimensional frame.
3. The restrictions of potentialities of this set up get linked with a hence dimensional frame and same manifest as:

- (i.) Spatial boundary.
 - (ii.) Solid domain.
 - (iii.) Creative origin.
4. Potentialities make available a format of spatial boundary.
 5. Restrictions emerge because of origin seal for the 'Domain'.
 6. 'Linear' of potentialities reach linear order permits chase as a 'Linear measure' which is potentialities and restrictions parallel to the set up of 3-space.
 7. These potentialities extend from set up of 1-space to that of 2-space while its restrictions are of reach of 3-space domain.
 8. Restriction of 3-space domain is their because of its seal at its origin.
 9. To transcend this restriction, seal is to be transcended. With removal of this restriction, a spatial order will come into play.

(II) SPATIAL ORDER

1. When space is approach with a dimensional frame of quadruple spatial dimensions, it makes a four space (set up).
2. 4-space (set up) is also of restriction and potentialities of a spatial order of its dimensional frame.

3. Spatial order means, 2-space in the role of dimension.
4. Spatial order dimensional frame means a dimensional frame of quadruple spatial dimensions.
5. The restriction and potentialities of this set up of this dimensional frame get linked with a four dimensional frame and same manifest as:
 - (i) Solid boundary.
 - (ii) Creative domain.
 - (iii) Transcendental origin.
6. These features and values or the features and values are idol of Lord Brahma, a four head lord, with a pair of eyes in each head, and there being a lotus seat of eight petals, on which Lord Brahma sits gracefully and meditates blissfully with cavity on his own heart, at whose core is the seat of transcendental Lord, and with the blessing of a transcendental Lord (five head Lord Shiv, Lord Brahma multiplies as ten Brahmas and enveloping Shiv Lok (5 space domain).
7. One shall sit comfortably and permit the transcending mind to glimpse these features which are parallel to the feature and values of hypercube 4, a representative regular body of 4-space.
8. With idol of Lord Brahma manifesting creation format for itself as well as for whole range of manifestation, as such make hypercube 4 as well being parallel to this format to transcend the restriction of spatial order one is to transcend through the sealed origin of 4 space domains.

9. This transcendence phenomenon would be format and feature of Lord Brahma is multiplying as ten Brahma.
10. It will amount the transition and transformation for the role of 4-space as domain fold of hypercube 4 to boundary fold of hypercube 5.
11. The potentialities of spatial order are of the format feature of solid boundary of creator the space (4-space).

(III)

TRANSITION FROM 3-SPACE VMS & T AND 4- SPACE VMS & T

1. 3-space VMS & T of a linear order (1-space in the role of dimension and dimension measure is (1 as 1).
2. 4-space VMS & T is of a spatial order with dimensional measure (2 as 1 and 1) as 2 giving rise to $\frac{1}{2}$ is the working unit).
3. One may have pause here and take note that the domain boundary ratio of hypercube 0 and of hypercube 1 give rise to value format (1/1 x 1/1) which makes a linear order unit/measure.
4. The domain boundary ratio of hypercube 1 and of hypercube 2 give rise to ratios format (1/2 x 2/1) as a working feature of unit/measure of spatial order 4-space.
5. A step head domain boundary ratio of hypercube 2 and hypercube 3 leads us to ratios format (2/3 x

- $3/2$) as a feature of unit/measure of a solid dimensional order.
6. Parallel to the set ups of square and cube, one may also chase the feature of circle and sphere, one shall be coming face to face with the structural set ups of different dimensional order unifying and leading to a coverage for continue in terms of discrete by reaching at the middle values for coverage and bridging of the gaps of whole numbers values/integral values range:, as an in terms of the set up (... -3 , $-2\frac{1}{2}$, -2 , $-1\frac{1}{2}$, -1 , $\frac{1}{2}$, 0 , $\frac{1}{2}$, 1 , $1\frac{1}{2}$, 2 , $2\frac{1}{2}$, 3 ...).

(IV)

INFINITE SEQUENCE OF INFINITE SEQUENCES

1. Spatial order is a spread sheet of a pair of axis format.
2. Infinite numbers of points make a set up of a linear order format.
3. And infinite set up of linear orders of infinite points each constitute a spatial order.
4. Linear order leads to infinite strings of finite strings.
5. Spatial order constitutes infinite spring surfaces of finite strings.
6. This reach from strings to springs is the phenomenon which deserves to be comprehended well.

7. In a way it is going to be reach from the set up of first element (earth) to that of second element (water).

(V) DIMENSIONAL SYNTHESIS

1. Dimensions of same order synthesis.
2. Single, double, triple, quadruple and higher numbers of linear order sequentially lead to synthesis value range (1, 3, 6, 10, 15, 21, 28, 36, 45, 55...).
3. Likewise spatial order dimension lead to synthesis value sequence (2, 4, 6, 8, 10, 12, 14, 16, 18, 20...).
4. A step head solid dimension synthesis values range comes to be 3, 5, 6, 6, 5, 3, 0, -4, -9, -15 ...).
5. One may have paused here and take note that the sequential differences of synthetic value of linear and spatial dimensions comes to be (1, 1, 0, 2, 5, 9, 14, 20, 27, 35, 44, 54 ...).
6. One may have pause here and take note that gap values of above difference value range comes to be (0,-1, 2, 3, 4, 5, 6, 7, 8 ...).
7. This brings us face to face with the compactified transcendence path sequentially unfolding through the origin fold of as of values strings (2, 2+3, 2+3+4, 2+3+4+5, 2+3+4+5+6, 2+3+4+5+6+7 ...).
8. Further as that above value sequence expect reorganization as ($4 \times 1/2$, 5×1 , $6 \times 3/2$, 7×2 , $8 \times 5/2$, 9×3 , $10 \times 7/2$...).

9. One shall sit comfortably and permit the transcending mind to glimpse and imbibe the above feature of sequential transcendence steps attaining continuity of coverage along with sequential setups of hypercube as 4 fold manifestation layers of sequential summation value (2, 6, 10, 14, 18, 22, 26, 30, 34, 38, 42 ...).
10. These values at next steps organization leads to value range (2, 8, 18, 32, 50, 72, 98 ...).
11. This further at next steps of organization lead to value range (2, 10, 28, 60, 110, 182 ...).
12. Still further the synthetic format of hypercube 1 to 6 within 6 space domain itself of format value $(4+5+6+7 = 22)$ will lead to the value $182+22 = 204$.
13. A step head, the dynamic state of framed 6 space domain leads to value $[6\{4+6 + (4 \times 6)\}] = 204$.
14. One may have pause here and take note that this bring us face to face with the sequential attainment of spatial order to solid order to creative dimensional order of our solar universe accepting 6-space domain format.
15. Further as that 2-space the role of dimensions of dimensions of 6-space.
16. As such spatial order takes us up till the dimension of dimension order of our solar universe.
17. The existence phenomenon of (Pursha/ with a human frame) as well is of the order of solar universe and such the above reach comes to be the reach up till the causal state (Karan Shreer).

2

MATHEMATIC OF SPATIAL ORDER

1. Spatial order means to space in the role of dimension.
2. 4 spatial dimensions constitute a 4-space dimensional frame.
3. Space vision dimensional frame of four spatial dimensional designated 4-spaces.
4. 4-spaces are of 4 folds.
5. These 4 folds are designated are dimension are boundary domain and origin respectively.
6. Here, 2-space palace the role of dimension.
7. 3-space palace the role of boundary.
8. 4-space palace the role of domain.
9. 5-space palace the role of origin.
10. These 4 folds together make a manifestation layer.
11. These manifestations layer is designated as hyper cube 4.
12. Hypercube 4 is the represented regular body of 4-space.
13. For 4-space body is of a spatial order as it has a 2-space in the role of dimension.
14. Mathematical of spatial order is the mathematics of 4-spaces.
15. It is the mathematics 4-space bodies.
16. It is the mathematics of hyper cube 4.
17. It the mathematics of 4 folds manifestation layer.

18. This manifestation layer is of quadruple artifices (2, 3, 4, and 5).
19. Num value 2 has a pair of artifices.
20. Num value 3 has triple artifices.
21. Num value 4 has quadruple artifices.
22. Num value 5 has five artifices.
23. Artifices are parallel to dimension.
24. Artifices are number value 2 parallel to dimension of 2 -space.
25. Artifices are value number-3 is parallel to dimension of 3 spaces.
26. Artifices are value number 4 parallel to dimension of 4 -space.
27. Artifices are value number 5 parallel to dimension of 5 -space.
28. As such , mathematically of spatial order is the mathematics of quadruple artifices (2.3.4.5)
29. This mathematics is also of dimension frame of 2-space, 3-space, 4-space, 5-space together constitution a manifestation layer.
30. This as such amount to mathematically working out the 4-space dimension 4-space boundary, 4-space domain and 4-space origin.
31. This mathematics specially work out dimensional synthesis, boundary split and takeoff, domain split and release of origin , transcendence at origin of 4-space.
32. This further chases synthesis split of transcendence ranges during two folds transcendence at the origin.

33. The transcendence at the origin takes 2 base fold and ascendance through origin into domain which ultimately amount to manifestation at the boundary.
34. These feature and value of mathematics of spatial order will help work out mathematics, science and technology of 4-space.

3

INFINITE SEQUENCE OF INFINITE SEQUENCES

(I)

UNIVERSAL FORMAT FOR CHASE OF ALL TYPES OF STRUCTURE

1. Line is a sequence of infinite point.
2. Surface is a sequence of infinite line.
3. Surface contains lines as well as surface.
4. Infinite sequence of point and infinite sequence of lines come of both are contain in a surface.

5. As such, infinite sequence of infinite sequences simultaneously, organizes as infinite sequence, as well as infinite sequence as infinite sequences.
6. With it points as structured point make a set up of infinite sequence of infinite sequences of whole range of structures contain in point.
7. With it, this format of infinite sequence of infinite sequences becomes a format for organization of whole range of infinite sequence of whole range of structure.
8. Accordingly, this format becomes the universal format for the chase of all types of structure.

(II)

UNIVERSAL FORMAT IS OF SPATIAL ORDER.

1. The universal format constitute by infinite sequence of infinite sequence of structure point is of spatial order, a pair of dimension of formats, firstly as of infinite sequence of point and secondly of, infinite sequence of infinite sequences of structure point.
2. Spatial orders create 4-space.
3. Accordingly 4-space becomes the creator's, as here the all range of structure gets formatted along and in term of a spatial order.
4. Creator's the space (4-space) is presided by Lord, Brahma.
5. Idol of Lord, Brahma is of format, feature, values, virtues, order and transcendental bliss.
6. Lord Brahma is for head Lord.

7. Each head is equipped with a pair of eyes.
8. Lord Brahma sits at a Lotus seat of 8 petals.
9. With the Cavity of Heart of Lord Brahma is the seat of Lord Shiva, the transcendental Lord.
10. Lord Brahma meditates within cavity of his on heart upon Lord Shiva and with the grace Lord Shiva, Lord Brahma, multiplies as ten Brahmas.
11. These features of idol of Lord Brahma are parallel to the feature of manifestation upon the format of hypercube -4.
12. One may have a pause here and take note that.
 - (1). Four heads are parallel four dimensions.
 - (2) Pairs of eyes are parallel to spatial order.
 - (3) Eight petals are parallel to solid boundary of eight components.
 - (4) Transcendental seat vision of cavity of heart is parallel to its transcendental origin (5-space).
 - (5). Ten Brahma is parallel to creative boundary (4-space as boundary) of ten components.
 - (6). One shell set comfortably and permits the transcendence mind to elimpse and imbibe the value of the above comparative feature of idol of Lord Brahma and hypercube 4.

(7). One shell comprehends and imbibes the values and virtues of above creation format of idol of Lord Brahma.

(8) One shell further comprehend and imbibe the values and virtue of the spatial order of creators the space as a 4 fold manifestation layer (2, 3, 4, 5) as a format of whole range of hypercube.

(III)

STRUCTURE POINT FULFILLED WITH STRUCTURES OF HYPERCUBE

1. Structure point is a point fulfilled with structure.
2. Structure point is a hypercube point when it is fulfilled with structure of hypercube.
3. Hypercube 3 point is a structure fulfilled with structure with hypercube 3
4. Likewise hypercube n point is fulfilled with structure of hypercube n.
5. Line is a set of infinite point/a sequence of infinite points.
6. Each point of line is fulfilled with structure of line.
7. Line constitutes a format upon which there may be a placement for points fulfilled with structure of 0-space/ 0-space body/ hypercube 0.

8. Likewise, on the format of line there may be a setting of points fulfilled with structure of any feature/values.
9. Line format becomes a track of a moving point.
10. Static point and dynamic point are of distanced features.
11. Dynamic point, at every moment of movement adds additional degrees of order.
12. One shell have a pause here and to permit the transcendence mind to comprehend and imbibe the feature and values of a dynamic point creating sequential strings of orders.
13. These sequential strings will be parallel to the number values ranges [1,(1,2),(1,2,3),(1,2,3,4),.....]
14. These values are parallel to sequence reach of [linear order, (linear order, spatial order), (linear order, spatial order, solid order), (linear order, spatial order, solid order, creative order), (linear order, spatial order, solid order, creative order, transcendent order)]
15. These sequential order strings are designated as Sathapatya measuring rods of dimensional spaces.
16. One shell have a pass here and to properly comprehend and imbibe the emergences of the measuring rods parallel to sequential movements of structure points.

(IV)

SEQUENTIAL PUSH IMPULSES LAYERS

1. Parallel to the phenomenon of a dynamic point, does the phenomenon of origin as a source of transcendental push of impulses constitute a progression path of creative manifestation layers of folds.
2. Along the format of measuring rods accepted by dimensional domains of respective dimensional orders created by a dynamic point.
3. It shall be taking us form $(1,2,3,4,5,6,\dots)$ format to $(1,1+2,1+2+3,\dots)$
4. It is this reach from $(1,2,3,\dots)$ to $(1,3,6,\dots)$ which deserves to comprehend well .
5. As the spatial order , as a pair of axis for reach as line and surface within a surface , the push impulses from the origin shell be taken along first axis as of values range $(1,3,6,\dots)$ and along the second axis it would be reach the value of range $(2,4,6,\dots)$.
6. One may have pass here and take note that this surface format for the line and surfaces , as such shall be of values format range $(1-2,3-4,6-6,10-8,15-10,\dots)$
7. One may have pauses here and to comprehend and imbibe the above feature and value of impulses push from origin source within and in terms of a spatial order.
8. The transcendence at origin is of two folds.
9. It splits the order of the origin.
10. The split is of the feature split of the dimensional frame itself.
11. With it, both axis of spatial order split into pairs of half axis.

12. Accordingly, the split for the first axis would be of orientations being East-ward and West-ward.
13. Like-wise the split of second axis as well as would be as a pair of halves of North-ward and South-ward orientations.
14. This way, paralleled orientation would be the progressions of dimensional measuring rods.
15. East-ward progressions expression would be parallel to values range $(0, 1, 3, 6, 10, 15, 21, 28\dots)$
16. West-ward progressions expression would be parallel to values range $(0, -1, -3, -6, -10, -15, -21, -28)$
17. North-ward progressions expression would be of values range $(0, -1, -1, 0, 2, 5, 9, 14, 20, 27\dots)$
18. South-ward progression expression would be of values range $(0, +1, +1, 0-2, -5, -9, -14, -20, -27\dots)$
19. One shall comprehended imbibe above feature values.
20. The above feature result into split into surface format into four quarters format
21. First quarters would be framed by a flow from origin along North and bending towards East.
22. It is the first pade(quarter)
23. It is designated first Swastik pade.
24. The second quarter framed by a flow from origin toward East with a band towards South.
25. It is the second pada.
26. It is designated as second Swastik pade.
27. The third pade/quadric is framed a flow of origin towards South with a bend towards West
28. It is third Swastik pade

29. Fourth pade is farm by a flow from origin toward West with a bend towards North.
30. One shall comprehend the values of above organization feature of spatial order a four quarters’.
31. This is organization of first face of the surface.
32. The organization of the second face of the surface with a three space (solid order) is going to be opposite orientation.
33. One shall comprehend and imbibe this recognized feature pair of faces of surface with a three space (solid order).
34. Between the pair of faces of a surface of opposite orientation is the set of neutral orientation set up of surface being affine organization format of spatial order.
35. It shall be making a set up of values of triple $(-0, 0, +0)$ in errantly transition and transforming in to triple set up $(+0, 0, -0)$.
36. Further , it also would be of its on shall be transition and transforming from horizontal sequence for the triple of pair of orientation into vertical pair of orientation triple for absolute value zero.
37. One shall sit comfortable and permit the transcending mind to comprehended and imbibe and the value of feature of above origination set up of spatial order within three space in their role of solid order.

(V)
FRAME SURFACE

1. Frame surface is a surface in within linear boundary.
2. Rectangles or frame surfaces.
3. Square is a framed surface.
4. $(N+2)^2 (N^2+4(N+1))$
5. complete set up as value $((N+2)^2$
It's of two parts, $(N^2+4(N+1))$
6. First part is the area of the surface square.
7. The second part is the boundary of four components.
8. Each component is value $(N+1)$ of its value.
9. Of its value 1 is due to length of the boundary component and value one is because of the corner point/end point of the boundary component.
10. The complete setup value $((N+2)^2$ is a square of closed interval of length and pair of end point of value $1+1=2$.
11. The three set ups interval length 1 or closed interval of value $N+2$, half open interval of value $N+1$ and open interval of value N .
12. The spatial order as square as hypercube 2 as two space domain with a linear boundary of four components deserves to be comprehended well.
13. The split of surface area of his square shall be segregating separating line (axis) of value $(N+2)$.

14. As such, the area N^2 in its two parts shall be segregating value of axis $(N+2)$ as well in two equal parts.
15. With it the remaining value of each part of surface area will be half of total value $(N^2 - N - 2)$.
16. For $N=0$ value would -1.
17. For $N=1$ value would -1.
18. For $N=2$ value would be 0.
19. For $N=3$ value would be 2.
20. For $N=4$ value would be 5.
21. For $N=5$ value would be 9.

Like that can be work out the entire organization format of all the four quarters of spatial order set up.

VEDIC MATHEMATICS
(MATHEMATICS OF SPATIAL ORDER)

1. Dimensional synthesis.
2. Dimensional layers synthesis.
3. Dimensional ranges synthesis
4. Domain split spectrum.
5. Transcendence within domain.
6. Transcendence through origin.
7. Ascendance from base thought origin.
8. Super imposition of higher order upon lower order.
9. Take off from the boundary.
10. Boundary as place value format.
11. Measuring rods.
12. Synthesis set up of hyper cubes.
13. Transcendent carriers.
14. Negative dimensional order.
15. Zero as whole number value.
16. Zero dimensional space.
17. Split of dimensional frame.
18. Absence of dimension.
19. Synthesis format of absent dimensions.
20. Reflection operation.
21. Horizontal reflection.
22. Vertical reflection.
23. Reflection pair of artifices.

24. Artifices of numbers and dimensional frames.
25. Structure points.
26. Infinite sequence of infinites sequences.
27. Sequential dimension orders.
28. Sequential boundary folds.
29. Sequential domain.
30. Compactified origins.
31. Divya Ganga Parvah.
32. Manifestation layers.
33. Transcendence ranges.
34. Self referral ranges.
35. Unity state.
36. Sole syllabus Om.
37. Pravanah.
38. Aum.
39. Omkar.
40. Udgith.
41. Vashtakar.
42. Sapt Bhumi.
43. Asht Prakti.
44. Nav Braham.
45. Prav Braham.
46. Ten place values system.
47. 2 N space value systems.
48. $N*N$ grid.
49. Geometric envelop of cube.
50. Structural components of cube.
51. Transcendental code value.
52. Devnagri alphabet.



SECTION-6

VEDIC MATHEMATICS

TEACHER MANUAL CLASS XI

SECTION-1

CONTENTS

1. Discrete to continuity
2 to 7
2. Zero at middle placement 8 to 11
3. Numbers of dimensions 12 to
14
4. Dynamic framed domain 15 to
16

VEDIC MATHEMATICS

TEACHER MANUAL CLASS XI

SECTION-1

INTRODUCTORY

File 23 23-3-17

1

DISCRETE TO CONTINUITY

1. One may pause to oneself as of how mathematical domain of Ganita Sutras and its processing system are approaching continuity in term of discrete and also as to how the discrete are to avail to construes out continuity?
2. The working rule of Ganita Sutra 1 is ‘one more than before’.
3. Here, on its first reading it appears that one it remain unconstructed. However closed reading of Ganita Sutra 1 one may released that in fact here in the text there is poser, as that ‘one is more than what’, and also in the

- sutras itself, there is an answer as that, 'it is more than the previous value'.
4. One may have pause here and take note that here, in sutra, it may set as that though 1 is being approach as a value more than, a value is equal to itself, from its previous value.
 5. One may have further pause here and take note that here, the consequential situations are: (I) 1. (II) Value 1. (III) Value of 1 equal to itself. (IV) Previous value (V) Reaching at subsequent value than that of the pervious value.
 6. One may have pause here and take note that here central constitutional situation is that of (1) itself.
 7. It has the feature, as of (I). Value 1 (II). Value equal to value 1 (III). Value 1 is more than the previous value, equal to value of 1 itself, and further as that value equal to value 1 as a previous value take to its subsequent value for which 1 itself is the previous value.
 8. There for (1), come at the centre and there is a reach to a value previous to value 1 and also at a value for which value 1 is the previous value.
 9. This that way makes a start with processing feature which from a given value permit reaching at values on either side of the given value, making the giving value as of middle (In between) placement.
 10. One may have pause here and take note that this feature of the processing system, simultaneously works equally for progression in both orientation, attaining a sequential order with the start with point being the middle placement.
 11. This triple placement attainment in reference to a given placement value and its previous attainment value, also

its subsequent placement, which given placement is the previous placement.

12. There for in reference to given placement (of value1), designated it and symbolizing it as (GP), the previous and subsequent placement being designated and symbolized as (PP)and (SP) respectively, we shall be having sequential placements order

PP

GP

SP

13. The same be

SP

GP

PP

14. It also can be as (PP, GP, SP)

15. Also it can be as (SP, GP, PP)

16. In fact this can be along any direction.

17. It would be blissful to take note that one of the meanings of formulation Purvena is east and reach.

18. There for the (PP) previous placement is to be of (East and Reach).

19. Along East from Earth and reach is (Sun).

20. There for (PP) placement (previous placement) may be Sun.

21. This placement, as previous placement (PP) for given placement that way can take as previous placement (GP) as pole star.

22. This may be as that previous placement (PP) is at earth and given placement (GP) is at sun, and the subsequent placement (SP) is at pole star.
23. It would be blissful to take note that $NVF(\text{Star}) = NVF(\text{Two})$.
24. Like that one may have given placement (GP) at Moon, and take previous placement (PP) at Sun and subsequent placement (SP) at Earth.
25. This can be other way round as that subsequent placement (SP) is that Earth and previous placement (PP) is that Sun.
26. It also can be that (GP) is along the axis of the Earth and the (SP) and the subsequent placement (SP) is along the path of motion around the Sun from East to North.
27. The previous placement (PP) in the situation would be along the path of motion from East to South.
28. The placement sequence may be along the axis of earth with (GP) at its centre and (PP and SP) end of the axis.
29. Likewise placement as (PP, GP, SP) along curves on the surface of the Earth, are of Moon, are of Sun, are of Pole Star, are in Solar Universe sphere.
30. This way be processing system feature value of Ganita Sutra 1 of sequential placements is of varied format.
31. Moreover the value of (1), in itself is of universal range as much as that $(1^0 = 2^0 = N^0)$ for whole range of value (1). Still further point as (1), interval as (1), square as (1), cube as (1), hypercube as (1), and to richness of value sphere of (1).
32. Square as 1 as of given placement (GP) and internal as of previous placement (PP) and cube of subsequent placement (SP) may permit chase to parallel to value triple (0, 1, 2).

33. Also the chase for cube, square and interval parallel to value triple (0, 1, 2,) will further makes chase to be of blissful values.
34. Still further blissful chased for (0 space, 1 space and 2 space) parallel to value stripe (0, 1, 2) will be very blissful, as here dimensional frame and artifice number shall be running parallel and also number value 0 marking its press whole number and 0-space as well marking its press as a dimensional space.
35. The reversal of orientation for the placement for (0, 1, 2) as (2, 1, 0) and parallel reversal for (0-space, 1-space, 2-space) as (2-space, 1-space, 0-space) shall be bring us face to face a very color full and deeply reach spectrum of structural feature of dimensional set up, as much as that it shall be bring us to focus the relationship of (0-space and 2-space) as that (0-space) placed role of dimension fold of hypercube 2 with (2-space) placed role of domain fold of hypercube 2.
36. The pair of spaces (0-space and 2-space) swapping their places in the placement sequence (0-space, 1-space, 2-space) and the resultant transformation as (2-space, 1-space, 0-space), in fact shall be expecting absorption of orientation, which in the context middle placement (1 space) would be nature of (+1 space) getting superimposed upon (-1 space).
37. It would be blissful to take note that (-1 space and +1 space) gets coordinated by the relationship (-1space) being the dimension fold of hypercube 1 with (+1 space) as its domain fold.
38. One may have pause here and take note that hypercube format is of 4 fold manifestation layer format one of its feature can be appreciated in the light of value of number 4 as that: $4 = 2+2 = 2 \times 2 = (-2) \times (-2)$.

39. One may have pause here and take note that here not only addition and multiplication operation gets superimposed but also the orientation (positive and negative) as well get superimposed.
40. It is feature which brings to focus to role of artifices of number value 2 and parallel to it a spatial dimensional order (2-space in the role of dimension of 4-space).
41. Further as 0 space placed the role of dimensions of 2 space and as $0+0 = 0 \times 0 = (-0) \times (-0)$ which is parallel to feature $2+2 = 2 \times 2 = (-2) \times (-2)$ but still there is very big difference as $0+0 = 0 \times 0 = (-0) \times (-0) = 0$ while $2+2 = 2 \times 2 = (-2) \times (-2) = 4$ and as such that the resultant reach of 0 space in the role of dimensions and of 2-space in the role of dimensions are of varied different, as much as that in case of 0 space the reach remain optical while in case of 2 space reach comes to be as 4 space.
42. One shall sit comfortably and permits the transcending mind to glimpses reversal of orientation for range of value (0, 1, 2, 3, 4) into (4, 3, 2, 1, 0), will bring us face to face as to the transcendence range of 0 dimensional order, and of negative creative dimensional order (-4 space) placing role of dimension of (-2 space) where by the end reach in the first case is at (4 space), while in second case, the reach is at (0 space).
43. One may have further pause here and take note that beginning with 0 dimensional order and reaching at (4 space) as base fold and then with reversal of orientation having a fresh start with (-4 space) in the role of dimension and reaching at (0 space) as base fold, creative phenomenon as that beginning having being with (0 space) in the role of dimension, and result reach is at (0 space) as base fold.

44. It is this features which place its role for attaining continuity with discrete.
45. One shall sit comfortable and permit the transcending mind to continuously remain in prolong sitting of trans and glimpse and imbibe this feature of Vedic Mathematical domain an its processing system to attain continuity with discrete.

ZERO AT MIDDLE PLACEMENT

1. Zero at middle placement, as given placement (GP) with (-1) as pervious placement and (+1) as subsequent placement make a triple value sequence (-1, 0, +1).
2. Orientation wise it take us to split as (-1, -0) and (+0, +1) with split meant as (0).
3. This affine value meant (0) for first half (-1, -0) and second half (+0, +1) brings us face to face with the difference values for synthesis values sequences of linear dimensions and spatial dimensions:

--	-	-	-	-	-	0	1	3	6	10	15	--
	15	10	6	3	1							
--	-	-8	-	-	-	0	2	4	6	8	10	--
	10		6	4	2							

4. The difference value range comes to be:

--	-5	-2	-0	-1	-1	0	1	1	0	2	5	--
----	----	----	----	----	----	---	---	---	---	---	---	----

5. Let us here pause here and take note that central 7 step long range of values (-0, -1, -1, 0, +1, +1, +0) bring to focus the in between organization arrangement of quardination of value triple (-0, 0, +0).

6. The range $(-0, 0)$ accepts bridging in term of values spare $(-1, -1)$.
7. The range $(0, +0)$ accepts bridging in term of a pair of value $(+1, +1)$.
8. One may have pause here and take note that $-2 = -1-1$.
9. The values $+2$ accept organization as $+2 = +1+1$.
10. It is this feature, which deserve to be comprehended well.
11. It is this feature which bring us face to face bridging unit occurring in a pair of $(-0, 0)$ is (-1) , while the bridging unit for $(0, +0)$ occur in a pair as unit value $(+1)$.
12. One have further have pause here and take note that values pair $(-1, +1)$ is parallel to the format of (-1) space as dimension and $(+1)$ space as domain.
13. It is these features which deserve comprehend well.
14. The extension of triple value range $(-1, 0, +1)$ and split of $(-0, -1, -1, 0)$ as $(-0, -1)$ and $(-1, 0)$ and further split of $(0, +1, +1, +0)$ as $(0, +1)$ and $(+1, +0)$ bring us face to face with the setup of a surface of a pair of faces and consecution of split of 2 dimensional frames for both faces of the surface and parallel split of (-1) space as dimension of $(+1)$ space.
15. One shall sit comfortable and permit the transcending mind to continually remain in prolonged sitting of Trans and to imbibe the values of their off.
16. One may have pause here and take note that spatial order (2-space) as dimension, gives rise to 2 as 1 unit.
17. Further as that $1=2/2$.
18. With it, 2 as 1 and 1 as 2 become the feature of a working unit.

19. It bring to us focus $(1/2)$ as a working unit.
20. It permit chase for values sequence as $(--, -1, -1/2, 0, 1/2, 1 --)$.
21. Further it will bring us face to face with a chased step $(--, -1/4, 0, +1/4, --)$
22. Like that 0 as middle placement value will permit approach to it from both sides.
23. However value 0 itself is the middle placement of values triple $(-0, 0, +0)$.
24. And the gap between $(-0, 0)$ is filled with structural steps $(-1, -1)$.
25. Likewise the gaps between $(0, +0)$ accept filling with structure $(+1, +1)$.
26. One shall have pause here and take note that it is this feature which deserve to comprehended in light of the organization format of $(-1$ space playing the role of dimension $+1$ space)
27. Because of it , the change of orientation make all the difference while processing along a line taking it to be of single orientation while line is setup of pair of orientation and there superimposition is responsible for having loss of one pace structure. Due to zero as a middle placement and same been dimension of 2-space in role of origin fold of hypercube 1. Transform processing format bringing as 4 fold hypercube 1.
28. One may have pause here and take note that line format , is hypercube 1 format
29. One may have pause here and take note that the pair of end points of an interval as a sequential organization associated to end point , a values pair $(-0, +0)$ while the in between point become the of fine value points (0) .

30. One may have pause here and take note that hypercube 1 as a 4 fold manifestation layer $(-1, 0, 1, 2)$ leads to summation value $(-1+0+1+2) = 2$.
31. It is this reach of the format hypercube 1 which deserve to be comprehended well.
32. Sequentially hypercube $(2, 3, 4, 5, 6\dots)$ will be leading to summation value for four fold manifestation layer being $(6, 10, 14, 18, 22 \dots)$.
33. It is this sequential format which deserves to be comprehended well.
34. One may have pause here and take note that values sequence $(2, 6, 10, 14, 18, 22 \dots)$ permits re-sequentially reach as $(2, 2+6=8, 2+6+10 = 18, (2+6+10+14) = 32, (2+6+10+14+18) = 50, (2+6+10+14+18+22 = 72 \dots)$.
35. One may have pause here and take note that value sequence $(2, 8, 18, 32, 50, 72 \dots)$ permit reorganization as $(1 \times 2, 2 \times 4, 3 \times 6, 4 \times 8, 5 \times 10, 6 \times 12 \dots)$.
36. One may have pause here and take note that this organization is parallel to fixation of boundary fold of hyper cubes $(1, 2, 3, 4, 5, 6 \dots)$.
37. Further has that this organization leads to sequential synthesis setup as (hypercube 1, hypercube 1 + hypercube 2, hypercube 1 + hypercube 2 + hypercube 3, hypercube 1 + hypercube 2 + hypercube 3 + hypercube 4 +).
38. One may have pause here and take note that this sequential set up is of Sathapatya measuring rods of domain fold of hyper cubes $(1, 2, 3, 4, 5, 6)$ themselves.
39. One shall sit comfortable and permit the transcending mind to glimpse and imbibe above value and feature.

NUMBER OF DIMENSIONS

1. Single dimension means only one dimension.
2. Pair of dimension means two dimensions.
3. Zero number of dimensions means no dimension.
4. One may have pause here and take note that zero number of dimension means there is no dimension is a valuable.
5. It is a state where dimensional order does not come in to play at all.
6. It is an affine state.
7. It is a non dimensional state.
8. It is because of it that $N^0=M^0$ for all value of N and M.
9. A reach from positive number to zero number of dimensions further deserve to be glimpsed to comprehended and appreciate that zero number of dimensions means no dimension while 0 space as dimension means a dimensional order creating 2-space domain.
10. As 0-space, is like all other dimensional spaces. As such would be a situation of 0 number of dimension of 0 dimensional orders.
11. A step head is the situation of negative number of dimensions.
12. Conceptually negative number of dimension is a situation different than that of dimensions of negative dimensional orders.
13. To say that there is a situation of single, negative numbers of dimension of linear dimensional order setup or of a any dimensional setup order, would mean the

- single dimension of the concert dimensional frame absent.
14. A 3 dimensional frame of 3 linear dimension can have a situation of 1, 2, 3 negative number of dimensions.
 15. Likewise N-space can have (1, 2, 3... N) Negative number of dimensions.
 16. This situation n negative number of dimensions for n space is parallel to the situation of 0 number of dimension.
 17. A particular situation arise in respect of a 0 space which has 0 number of dimension, as such 0 negative number of dimensions for 0 space puts 0 space as -0 space , otherwise 0 space with 0 number of dimensions is +0 space.
 18. This bring us face to face with a range of triple spaces (-0 space, 0 space and +0 space).
 19. One may have pause here and take note that within 4-space, which is a spatial dimensional order, linear dimensional frame 3 space split into a pair of 3 dimensional frame of half dimension.
 20. This way, 3 dimensions split into 6 half dimensions.
 21. Both 3 dimensional frame of half dimensions lead to manifestation for the space so framed such dimensional frames of half dimensions.
 22. There for each of this pair of dimensional frame manifest dimensional domain distinctively , such that those are set ups of opposite orientation
 23. One may have pause here and have a fresh a visit to set up a cube being hypercube 3.
 24. In each of the corner point of the cube is embedded a 3 dimensional frame of half dimensions.

25. There are 8 corner points, and as such, there are 3 dimensional frames of half dimensions with origin superimposed upon the seat of corner point.
26. Letter have fresh visit to this setup of a 3 dimensional frame imbedded in corner point of cube with origin superimposed in the corner point.
27. It would be blissful to take note that the orientation of all the 3 dimension of this 3 dimensional frame is inward, toward center of the cube.
28. The setup of 3 dimensions as a set up of 3 half dimensions, are absent , in words other in the case of 3 dimensional frame embedded in the corner point of the cube, the number of dimensions present, as well as number of dimensions absent is equal.
29. A dimensions present manifests a 3 dimensions frame in the space so framed. the set up of 3 absent dimensions makes the outside space and affine four space
30. It is this feature which deserve to be comprehended well
31. It is this feature which further bring to focused has to how the spatial order with its spatial unit make 3 dimensions being a value $(2/2, 2/2, 2/2/)$ respectively.
32. And three half dimensions become of values $(1/1, 1/1, 1/1)$.
33. As such one 3 dimensions of half dimensions permit approach as a set up of number of dimension present being 3
34. And further also, the number of dimensions being absent, as being 3.it is this situation and phenomenon which deserve to be comprehended well. It will help to us enquire insight and enlightenment for the feature and way NVF (equal) = NVF (three) = NVF (light) = NVF (domain) =NVF (half black).

DYNAMIC FRAMED DOMAIN

1. Dynamic framed domain means conceptually domain fold being in a dynamic state, along with its dimensional frame, along all of its dimensions.
2. N space domain is of n dimensions.
3. (N-2) space placed the role of dimension.
4. The motion of n space domain along its dimension of value (N-2) makes it as setup of (N+N-2).
5. The dimensional value (N×N-2) further adds a value to the above value and it become (N+N-2)+(N.N-2)
6. As this much value is emerging along its each dimensions as such the total value of dynamic dimensional domain and comes to be $[N\{N+N-2+N(N-2)\}]$.
7. For N = 1, 2, 3, 4, 5, 6, 7 ... we can reach us dynamic state value for framed 1, 2, 3, 4, 5, 6, 7 ... domain.
8. The value for dynamic state 6 space domain comes to be $6(6+4+6 \times 4) = 204$.
9. One may have pause here and take note that the hypercube 1 to 6 leads to summation value for their four fold manifestation layer as (2, 6, 10, 14, 18, 22 ...)
10. On re-sequence quardination it shall be sequential emerging to the value range (2, 8, 18, 32, 50, 72
11. The summation value optical six setups come to a $2+8+18+32+50+72 = 182$.
12. Hypercube 6 format of four fold manifestation layers 4, 5, 6, 7 lead to summation value $4+5+6+7 = 22$ and with availability of this format value to above

value 182 takes us to $182+22=204$, which is equal to dynamic state value of 6 space value framed domain.

13. One shall sit comfortable and permit the transcending mind to continually to remain in prolonged sitting of and glimpse to imbibe phenomenon of 6 space framed domain being in a dynamic state along the its 6 dimension.
14. One may have further pause here and take note that Surya is a six space domain in dynamic state.
15. The existence phenomenon within human frame as well is of values and feature of 6 space framed domain in a dynamic state.
16. This state is designated as 'Pursha state'.

SECTION-7

VEDIC MATHEMATICS OF 6 SPACE

SECTION 1

LEARNING STEPS

CONTENTS

1. Lesson 1 Vedic Mathematics
2. Lesson 2 learning steps.
3. Lesson 3 glimpse and imbibe mathematical domain
4. Initiation phases and stages
5. Vedic Mathematics of 6-space
6. Sequential learning steps during this year
7. Recapitulation of pervious year learning
8. What we have learnt during this year
9. Learning technique
10. Glimpsing and imbibing of values of 6-space within 5-space
11. Class 12 contents
12. Sunlight and black matter

13. Sathapatya measuring rod and
Shad chakra format
14. Numerals 1 to 9 and place value '0'

6 SPACE VEDIC MATHEMATICS OF 6 SPACE

SECTION 1

LEARNING STEPS

1

LESSON 1 VEDIC MATHEMATICS

1. Mathematics of Ganita Sutra, may be designated as Vedic Mathematics.
2. Ganita Sutras are 16 in number. In addition there are 13 Ganita Upsutras.
3. Text of Ganita Sutra is in Devnagri script. The text of Ganita Sutra and upsutras avails just 519 letters in all.
4. Of these, only 36 of them are distinct letters.
5. These are 10 vowels to Yama letter, 3 Ushmna letters, 4 Anthsatha letters and 17 Varga consonants.
6. 17 varga consonants are:-
 - (i) First and last letters of five rows.
 - (ii) Second and third letters of first row.

- (iii) Third letter of second row.
 - (iv) Second third and fourth letters of fourth row and ,
 - (v) Fourth letter of the fifth letter of varga consonants.
7. Ganita Sutra 1 is the source Ganita Sutra and Ganita Upsutra 1 is the source Ganita Upsutras.
 8. Ganita Sutras and Ganita Upsutras compliment and supplement each other.
 9. As the name suggests, upsutras are subseidery mathematical formulae while Ganita Sutras are the principle formulae.
 10. Ganita Sutra 1 and Ganita Upsutra 1 being source sutras and upsutras, shall be comprehended and imbibed together the initiation of learning step of Vedic Mathematics is to be with the learning of the working rule of Ganita Sutra 1 and Ganita Upsutra 1.
 11. Ganita Sutra 1 and Ganita Upsutra 1 complement and supplement each other.
 12. Ganita Sutra 1 and Ganita Upsutra 1 sequentially lead to first principle of bases base mathematics of vedic systems and there axioms and pustules of processing steps.
 13. Ganita Sutras and upsutras are complete in themselves and these sutras are to be red and to be interpreted interms of the principle of Ganita Sutra and Ganita Upsutras themselves.
 14. The text of Ganita Sutra and upsutras is very short. There are just 519 letters. With only a few recitations one may memories this text in its sequential composition order.
 15. One's the text gets memorized then the whole process becomes a mental process, as even this much return text stands dispensed with .

16. This is the reason while Vedic Mathematics is designated as a mental mathematics.
17. Further pre required for formal learning of Vedic Mathematics is just a counting arithmetic reach uptill 5×5 .
18. One having in serial skill of counting arithmetic uptill 5×5 and a memorized text of Ganita Sutra and upsutras, one may, in most natural way incite for glimpsing, comprehend and imbibing the values and processing steps of Vedic Mathematics of Ganita Sutras.
19. The silent features of Vedic Mathematics of that whole existence phenomenon within our solar universe is ultimately tamed as value of numbers channelize able along artifice of whole number parallel to dimensional frames.
20. Vedic system have successfully tamed curvature parallel to diameter and square unit have been tamed along a straight line as a whole number line of a pair of orientation.
21. In addition to classic and orthodox arithmetic operations, Vedic systems have exploited reflection operation of both horizontal and vertical format. With it, the powers and series have been tamed.
22. A sequence of infinite sequences has been settled as the basic format, designated as special order format.
23. Along the format is settled a sequence of sequential ranges of measuring rod for chase of dimensional folds of hyper cube setups of representative regular bodies of dimensional spaces.
24. The unique attainment of Vedic system is its parallel transition and adoption of the formats parallel to inward and outward transcendence and ascendance progression at the origin folds of manifestations.

25. This has resulted into many manifestation and fresh transcendence at the compactified origin seat.
26. As such the learning step of Vedic Mathematics, naturally are to be parallel to the above format feature values organization arrangement as Ganita Sutras and upsutras.
27. The first letter of the text, the sixth vowel which is accepted transcendence code value 6 and geometric format of a dimensional frame of six dimensions of creative dimensional order becomes the source structural key of mathematics domain of Ganita Sutras and upsutras.
28. This makes mathematics domain of Ganita Sutra and upsutra being parallel to six space domain and of hypercube 6 format of our solar universe.
29. It would be blissful to take note that our existence phenomenon with an human frame as well is sustained by organization format of shad chakra with an six internal circuits of external characteristics (2, 4, 6, 8, 10, 12) parallel to boundary component of hypercube 1 to 6 synthesizing Sathapatya measuring rod, along which is settle and organize Vedic knowledge and its systems including that Devnagri alphabet format, as well of Ganita Sutras and upustras composition and format.

LESSON 2 LEARNING STEPS:

1. Learning steps are Vedic Mathematics are to be parallel to the processing steps of Vedic Mathematics.
2. First stage of Vedic Mathematics learning is of the nature of formal exposure which being with recitation of the text of Ganita Sutra and upsutras.
3. The fruit of this learning step is that the text of Ganita Sutra and upsutras get printed formulae in the mind of the sadhka (student of Vedic Mathematics).
4. With successful memorizing of the text, one shall be successfully resting the text without the help of written text support.
5. As the text is a sequential composition of 519 letters organized and grouped as 16 sutras and 13 upsutras having definitely settled sequence, as such the organization features and values of the text of Ganita Sutras and upsutras will be blissfully part of the intelligence field of Sadhkas.
6. In the back ground of the above attainment, with the help of the working rule of role of Ganita Sutra 1 and Ganita Upsutra 1 this shall be a further formal exposure of young minds to the counting arithmetic.
7. Here it may be presumed that Sadhkas are already informally exposed to counting arithmetic uptill 5×5 .
8. The formal counting exposure may be of following steps:
 - (i) Counting, direct and reverse, beginning and ending from and uptill any given counts. Say, one may be exposes to direct count starting from count 5 and reach in uptill count 15, further, beginning may be

count 5 and reach to be uptill count 5. This exposure will be a big step towards perfection of intelligence in young minds.

- (ii) Counting direct and reverse, with uniform and non uniform value jumps beginning from and reaching uptill any given pair of counts.
 - (iii) Say one may be exposed counting reach for even counts beginning with count 2 and reaching uptill count 20. The other way round, the exposure may be beginning with count 20 and reaching count 2 covering all the even count in between.
 - (iv) Further count may one Sadhkas be beginning with count zero and sequential count with single, double, triple, quadruple jumps and to see that the reach step are of value counts are (1, 3, 6, 10). In the context reversal exercise w would be beginning with with 10 and reaching at count 1 by sequential jumps on count value (4, 3, 2, 1) respectively.
 - (v) More advantage stage exposing can be of mixed steps say of increase of value 2 decrease of value 1 as alternative steps in both direct and reverse counting exercises.
 - (vi) More complex exercise shall be a waiting for the Vedic Mathematics students of counting arithmetic.
9. In the background above exposure, Sadhkas may be formulae exposed to working ten place value system in terms of numerals (0, 1, 2, 3, 4, 5) in stand of range of numerals (0, 1, 2, 3, 4, 5, 6, 7, 8, 9) this will exposure to the organization of bigger numeral values in terms of smaller numeral s values as $6 = 5+1$, $7 = 5+2$, $8 = 5+3$ and $9 = 5+4$.

10. It will further bring into negative value numerals say (-1, -2, -3, -4,) with how helps bigger numerals may be chased in terms of their deficiency from the base value 10 as $10-1 = 9$, $10-2 = 8$, $10-3 = 7$, $10-4 = 6$.
11. The re-organization of 10 numeral ranges into newly invented numerals (0, 1, 2, 3, 4, 5, -4, -3, -2, -1), bigger numerals will gets replaced by smaller value numerals (positive as well as negative).
12. That way the reach of arithmetic with smaller numerals will become the special feature, skill and technique of Vedic arithmetic, it is popularly none as vinklum system.
13. Students of Vedic arithmetic shall perfect their intelligence by acquiring the skill of vinklum system.
14. Writing of table 100 x 100 can be learned in one citing with the technique of vinklum system.
15. Vedic arithmetic avails algebraic format for its operations.
16. As such the students of Vedic Mathematics shall be at the initially state itself be exposed to algebraic format of arithmetic operations.
17. For it initially exposure is to be in terms of working rule of Ganita Sutra 2 and Ganita Upsutra 2 supplemented and complimented by the working rule of Ganita Sutra 1 and Ganita Upsutra 1.
18. The ten placed value system are organization format if of feature and value one variable polynomial expression for the numbers values.
19. The transitions ten place value expression of number value to its algebraic polynomial format is straight. One's one has glimpsed and imbibed these features, it would be a natural flow of steps for reaching at arithmetic steps the algebraic polynomial way.

20. Multiplication and division operations will become very simple operations.
21. Student of Vedic arithmetic shall be exposed to arithmetic operation on algebraic format.
22. Create goes to Swami Bharti Krishna Tirtha Maharaj to decode to these feature and value of these Ganita Sutras arithmetic of algebraic format.
23. Swami j books (Vedic Mathematics) and Swami Diary 1950 is the two basic sources which shall be proper availed by the student of Vedic arithmetic, in-particular.
24. The Vedic arithmetic source sutras and upsutras been taken as Ganita Sutras 1 and 2 and Ganita Upsutras 1 and 2, which constitute a class and shall be glimpsed and imbibed fully.
25. However the formal approach to Vedic arithmetic on algebraic format will take to Ganita Sutras 3 to 7 and Ganita Upsutras 3 to 9.
26. For artifice of number to be chased as dimensional frames is going to be of the feature of Vedic arithmetic on geometric formal and for it exposure is to be of Ganita Sutras 8 to 11 and Ganita Upsutras 10 and 11.
27. A step head the Vedic arithmetic of creative manifestation and transcendence three from is exposure is to be Ganita Sutras 12 to16 and Ganita Upsutras 12 and 13.
28. The learning steps of Vedic Mathematics, Vedic algebra, Vedic geometry, Vedic manifestation and transcendence mathematics are the particular aspects of Vedic Mathematics of Ganita Sutra and Ganita Upsutra.
29. One shall sequentially exposure to the mathematical domain of Ganita Sutras and upsutras.

30. Learning steps, naturally, are to be parallel to the organization format of mathematical domain of Ganita Sutras and Ganita Upsutras.

3

GLIMPSE AND IMBIBE MATHEMATICAL DOMAIN

1. Vedic Mathematical domain is a self stained domain.
2. It beginning and end is same meant and same is inherently embedded into its domain itself.
3. This being so, the way to approach this domain is to glimpse and imbibe the values of this domain.
4. Glimpse and imbibing is the mental process.
5. Transcending mind transcendence through this domain and imbibes its values.
6. Therefore one shall sit comfortably and permit the transcending mind to glimpse and imbibe the values of this domain.
7. The glimpsing and imbibing as such becomes a transcending range having its initiation with sole syllable 'Om' to and to reach at synonym 'Pranava'.
8. This reach is the attainment of this 'Sadhana penance'.
9. This attainment is of value 'Sri Om'.
10. A reach from 'Om to Sri Om', inherently sets into initiation of cycling of cyclic system which take us from end reach point back to initiation point itself and thereby a cyclic circuit completes its processing steps of its cyclic path, along which the processing systems continuously remains in a processing mode.
11. The initiation value 'Om' and reach value 'Pravana', of inherent potentiality 'Sri Om', settle the processing steps

for the Vedic Mathematical of Ganita Sutras and upsutras.

12. There are 16 sutras and 13 upsutras.
13. These together sole syllable Om being and the pair of syllable Sri and Om as the attainment points make the processing range being $1+16+13+2 = 32 = 2^5$ steps.
14. One may have pause here and take note that the choices from the range (1, 2, 3, 4, 5, 6) for reaching at summation value 6 in each case, are preciously 32 in numbers.
15. These 32 choices are :

- (I) $6 = 1+1+1+1+1+1$
- (II) $6 = 1+1+1+1+2$
- (III) $6 = 1+1+1+2+1$
- (IV) $6 = 1+1+2+1+1$
- (V) $6 = 1+2+1+1+1$
- (VI) $6 = 2+1+1+1+1$
- (VII) $6 = 3+1+1+1$
- (VIII) $6 = 1+3+1+1$
- (IX) $6 = 1+1+3+1$
- (X) $6 = 1+1+1+3$
- (XI) $6 = 3+2+1$
- (XII) $6 = 3+1+2$
- (XIII) $6 = 1+2+3$
- (XIV) $6 = 1+3+2$
- (XV) $6 = 2+3+1$
- (XVI) $6 = 2+1+3$
- (XVII) $6 = 2+2+2$
- (XVIII) $6 = 2+2+1+1$
- (XIX) $6 = 2+1+2+1$
- (XX) $6 = 2+1+1+2$
- (XXI) $6 = 1+2+1+2$
- (XXII) $6 = 1+1+2+2$

$$(XXIII) 6 = 1+2+2+1$$

$$(XXIV) 6 = 4+2$$

$$(XXV) 6 = 2+4$$

$$(XXVI) 6 = 4+1+1$$

$$(XXVII) 6 = 1+4+1$$

$$(XXVIII) 6 = 1+1+4$$

$$(XXIX) 6 = 1+5$$

$$(XXX) 6 = 5+1$$

$$(XXXI) 6 = 3+3$$

$$(XXXII) 6 = 6$$

16. One may have pause here and take note that Ganita Sutra 1 is a composition of 16 letters while Ganita Upsutra 13 is of 32 letters.
17. Sole syllable Om accepts transcendental code value '16'.
18. One may have pause here and take note that $2^4+2^4 = 2^5$.
19. Further that $2^5-1 = 31$.
20. One may have pause here and take note that the 32 points cover 31 points range.
21. Further 31 is prime number.
22. Still further that it parallel to 31 structural component of cube.
23. Perfect number 496, third perfect number accepts 31 as the biggest prime proper divisor, and that there is a range of 9 proper divisors whose summation values comes to be 496.
24. Triples digits (4, 9, 6) accepts quardination as $9 = 6 \times 3/2$, $4 = 3/2 \times 3/2$.
25. The quarter by quarter synthesis of a square and octant by octant synthesis of cube. Avails artifices of numbers 9, 6, 4.
26. One may have pause here and take note that at first perfect number 6 accepts 3 as the biggest prime proper divisor.

27. Second perfect number 28 accepts 7 as the biggest prime proper divisor.
28. Third perfect number 496 accepts 31 as the biggest prime proper factor.
29. One may have pause here and take note that values triple (3, 7, 31) go parallel to 3-space accepting 7 geometric ranges and cube, the representative body of 3-space is a set up of 31 structural components.
30. Further as that $519-496 = 23 = 3+5+3 \times 5$.
31. There are 519 letters of the text of Ganita Sutras and upsutras.
32. One shall sit comfortably and permit the transcending mind to glimpse and imbibe above features and values.
33. One shall visit and revisit mathematical domain Ganita Sutra and upsutras.
34. One shall glimpses value 16 of sole syllable Om and to imbibe its values comprehend and imbibe the values of Ganita Sutra 1. And like that from one shall sequentially reach uptill the attainment point of value 'Sri Om'.
35. One may have pause here and take note that $2^4 = 4^2$.
36. As such the reverse processing attainment is of equal value.
37. As such a reach from Ganita Sutra 1 to Ganita Sutra 8 and the other way round the reach from Ganita Sutra 16 to Ganita Sutra 9 shall be splitting the mathematical domain into a pair of halves with the inherent feature of spatial order being of 0 order, as such there happen to be a straight jump and their remain no gaps to bridged for continuity from Ganita Sutra 8 to Ganita Sutra 9.
38. With it Ganita Sutra 1 to Ganita Sutra 8 there would need to seven gaps and from Ganita Sutra 9 to Ganita Sutra 16 there would be need to bridge only 6 gaps because of spatial order format for the second half.

39. It would be a blissful to take note that there are 13 Ganita Upsutras and 13th Ganita Upsutra is a text of 32 letters equal to the combined text of Ganita Sutras 15 and 16.
40. One shall sit comfortably and permit the transcending mind to glimpse and imbibe above values and features of organization format of mathematical domain Ganita Sutras and upsutras. And to initiate oneself for proper insight and appropriately enlightenment for processing approach to Vedic Mathematical domain of Ganita Sutras and upsutras.

4

INITIATION PHASES AND STAGES

1. One way to grade initiation phases and stages of learning of Vedic Mathematics by young minds may be as follow:

Informal exposure

2. Informal exposure of young mind to Vedic Mathematics systems, gets initiated of its own from the moment of very first breath inhaled by newly born one.
3. This natural process is automatically picked up by the parents.
4. And, same continues uptill the young mind starts consciously responding to signals of parents and others.
5. Silently young mind transists from the phase of informal instructions to the formal communication.
6. With it, the initiation phase of formal exposure of Ganita Sutras begins.

Formal exposure

7. Formal exposure to Ganita Sutra is to be in terms of Ganita Sutra 1.
8. It is the rule of 'one more than before', that's the art of counting is to be inculcated.
9. With imbibing of the values of art of counting, young mind will be on the path of sequential ordering.
10. The perfection of this art will make one to intelligence enough to perform, direct counting as well as reverse counting.
11. This skill of counting from a given count to any other count, in its both way will go a big step forward for formal mathematizing thinking process.
12. This element of reasoning will be foundation of doing counting with jumps, of uniform jumps, and of sequential jumps.
13. Direct counting with uniform and sequential jumps, together with reverse counting with uniform and sequential jumps, will become the index of perfection at the initial formal exposure of young minds to mathematical reasoning and mathematical steps.
14. Here there would be a silent exposure to basic mathematical operations, none as 'addition and subtraction'.
15. It will further facilitate to expose young mind to practical exposure of abstract concept of summity as proportionality.
16. It would be a face and stage of formal exposure to Ganita Upsutra 1.
17. As the Ganita Sutra 1 is the sources sutra and Ganita Upsutra 1 is the sources upsutra as such parents and

Vedic Mathematics teachers are going to be under solemn duty and responsibility to have a very gentle exposure for the young mind to these Vedic Mathematics foundational values by making whole process being natural and smooth.

18. Primary stage schooling as such though are going to be restricted uptill Ganita Sutra 1 and Ganita Upsutra 1 but it is upon this foundation that whole range of intelligence field is to grow to be of the order of mathematical domain Ganita Sutras and upsutras.

Middle class

19. Middle class level mathematics exposure will take us to Ganita Sutras 1 and 2 and Ganita Upsutras 1 and 2.
20. During this stage the focus will remain upon the place value formats.
21. Principle place value format is going to be ‘10 place value system’.
22. It will make available 9 as numerals and placement value ‘0’ as the basic mathematical entities.
23. These ten values ‘0, 1, 2, 3, 4, 5, 6, 7, 8, 9’, as such is a range of 10 single value digits numbers values.
The steps head, is going to be a range of one hundred double digit number beginning with ‘00’ and having a reach uptill ‘99’.
24. The organization of ‘01 to 99’, a ranges of 99 double digit numbers, on its chase along 9x11 matrix /grid bring us face to face the following setup which accepts division as upper part and lower part with values ranges (10, 20, 30, 40, 50, 60, 70, 80, 90), being the central separation flow range of values.

25. The upper part as well as lower part accepts mirror lines (11, 22, 33, 44) and (55, 66, 77, 88, 99). For upper part and lower part, their by their happen a paring of double digit refecton paring numbers values. Like (01, 10).
26. With it, there would be a digit wise focus upon the numbers values.
27. One may have a pause here and take note that 9 numeral and place value '0' are playing the role of digits. This range of digits (0, 1, 2, 3, 4, 5, 6, 7, 8, 9) may be splits into sub ranges of lower value and higher value digits.
28. Numeral 6, 7, 8, 9 are the bigger value digit while remaining are the smaller value digits.
29. Vedic systems help replace bigger digits in terms of value of smaller digits. This technique knew as vinculum system, dispenses with bigger digits and because of it chase of number values becomes as of very small value steps.
30. With this digit by digit approach, that to of only smaller digits makes arithmetic a very blissful discipline.
31. With compression and imbibing of this villculum technique mathematics becomes a very blissful system.

High and higher secondary classes Vedic mathematics

32. Sequentially high and higher secondary Vedic mathematics attains excellence with perfect intelligence.
33. During these four years, linear, spatial, solid and creative dimensional order mathematics values are to be glimpse and imbibe by the Sadhkas.
34. During class 9 focus is to remained upon linear order mathematics.

35. Arithmetic is to be approached algebraic format. The mathematical domain of Ganita Sutras 1 and 2 and of Ganita Upsutras 1 and 2 is to be approached upon the algebraic format values of Ganita Sutras 3 to 7 and Ganita Upsutras 3 to 9.
36. During class 10 focus would be upon spatial order mathematics. This shall be concentrated upon spatial order 4 space accepting hypercube 4 as its representative regular body.
37. One may have pause here and take note that high school Vedic Mathematics learning during high school class (9, 10) Sadhkas shall be exposed to 3-space and 4-space mathematics .

Higher secondary classes Vedic Mathematics

38. With perfection of intelligence by exposing by 3-space and 4-space Vedic Mathematics a perfection of intelligence will be attained for the students in the background of perfection of intelligence with the values of class (9, 10) of Vedic Mathematics, excellence would be aimed during learning classes (11, 12) Vedic Mathematics concentrated upon 5-space and 6-space Vedic Mathematics.

VEDIC MATHEMATICS

OF 6-SPACE

1. This is the final school class.
2. During this year focus of learning is upon 6-space mathematics.
3. It is of creative dimensional order and is format of hypercube 6.
4. Sun, solar universe and human body manifest along this format.
5. Sathapatya measuring rod synthesis hypercube 1 to 6 is the measuring rod of 6-space domain.
6. Lord Vishnu is the presiding deity of this measuring rod.
7. Lord Brahma is the presiding deity of the measure of this measuring rod.
8. Ganita Sutras 12 to 16 and Ganita Upsutras 12 and 13 would be the central focus of learning during this year.
9. During this year the chase of manifested creations are to be chased along the transcendence format.
10. Transcendence format is the base fold of the manifested creations.
11. 8-space plays the role the base fold of self-referral domain within 6-space domain.
12. Glimpsing 'Viloknam' is the index of excellence attain by Sadhkas during present four years exposure to Vedic Mathematical domain of Ganita Sutras and upsutras.
13. With complication of this course one is expected to perfect in excellence index of the order of glimpsing and

imbibing the values of existence phenomenon of our solar universe within without frames including human frame.

**SEQUENTIAL LEARNING STEP DURING
THIS YEAR**

1. The learning during this year upon the foundation of learning pervious 3 years.
2. Learning during this year as such is to be initiation upon the assumption of proper learning of previous year.
3. During previous 3 years focus has been upon format of hyper cube 3,4and 5.
4. Further focus remains upon Ganita Sutras 1 to 11 and Ganita Upsutras 1 to 11.
5. The role of 6-space in reference of 3, 4, 5, spaces is to be of special attains during this year. In addition the focus would remain upon different role of 6-space.
6. In particular, focus is to remain transcendence through 6-space domain.
7. This shall be brings us face to face with the transcendence phenomenon at the origin fold of hypercube 6.
8. Transcendence at origin fold of 6-space is going to be of 2 fold, firstly transcendence for 6-space domain through origin for its reach uptill 8-space as base fold.
9. Secondly there would be a phenomenon of ascendance from 8-space base fold to 7-space origin fold into 6-space domain fold of ultimate manifestation as a transcendence boundary of self-referral domain.
10. The learning step during this year, that way are to be for glimpsing and imbibe above format feature values of existence phenomenon along hypercube six formats.

RECAPITULATION OF PERVIOUS YEAR
LEARNING

1. During previous years we have learnt about 3, 4, 5 space format mathematics.
2. This has exposed us to arithmetic on algebraic, algebraic on geometric, geometric on manifestation format, and now it shall be learning about manifestation along transcendence format.
3. Further as that Vedic Mathematical systems are of cyclic feature, as such with the completion learning during this year we shall be acquiring potentiality to reach back from end sutra and upsutra to reach back at source sutra 1 and source upsutra 1.
4. The end sutra (sutra 16) deserves to be visited once again.
5. Likewise last Ganita Upsutra (Ganita Upsutra 13) as well deserves to be visited once again.
6. One shall sit comfortably and pose to one self within one can sequentially reach back uptill the source sutra and upsutra.
7. To evaluate one self of one's glimpsing and imbibing values of Vedic Mathematics domain of Ganita Sutras, one shall revisit Ganita Sutras and upsutras and to ensure one learning about the value and virtues of Ganita Sutra and upsutra both as a single integrated mathematical domain.
8. One shall prepare one's on compendium of values and learning step of values of mathematical domain of Ganita Sutras and upsutras.

9. One shall also compile one's own dictionary on technical and conceptual terms and formulation of Ganita Sutras and upsutras.
10. One way to test oneself is to pose to oneself if one can teach Vedic Mathematics to young minds.
11. Further way to index one's excellence of comprehension and imbibing the values of Vedic Mathematics would be that one shall attempt topical text books of Vedic Mathematics for classes 1 to 8 and also for classes 9 to 12.

SUM-UP

1. As a grand finale of Vedic Mathematics learning , one shall reach at one's own sum up of learning .
2. This shall be inclusive of all the specific steps learned during four years.
3. As mathematics learned during these years is going to be the basis of Vedic Mathematics, Science & Technology of 3, 4, 5, 6 spaces respectively, as such the glimpsing and imbibing of the value should be blissfully complete.

8.

WHAT WE HAVE LEARNT DURING THIS YEAR

**I
OVER VIEW**

1. This year focus has been upon 6-space.
2. This focus has been centered around hypercube 6 format.
3. Hypercube 6 is a four folds manifestations layer of creative dimensional order, transcendental boundary, self-referral domain and unity state origin.
4. Its base folds 8-space.
5. 6-space domain permits chased along Sathapatya measuring rod of synthesized by hypercube 1 to 6.
6. This measuring rod manifests transcendental carriers' paths for reach uptill the orb of the sun.
7. From orb of the sun, unity state carriers take over for reach within Brahman domain (9-space domain).
8. This is a reach of and along creative order self-referral domain (4, 5, 6, 7, 8, 9) with 4-space as dimensional, 5-space as boundary, 6-space domain, 7-space origin, 8-space base, 9-space as format of base.
9. It is this creative order formatting for 6-space domain which becomes the blissful attainment of learning during this year.

**II
CREATIVE ORDER SELF-REFERRAL RANGES
(4, 5, 6, 7, 8, 9)**

1. 4-space as dimensional of 6-space leads to creative dimensional frame of 6 dimensions.
2. 5-space as boundary leads to transcendental boundary of 10 components of self-referral domain.
3. Transcendental boundary of 12 components gets coordinate in terms of $12 \times 5 = 60$ solid coordinates.
4. Further transcendental boundary of 12 components gets fixed in terms of $12 \times 6 = 72$ creative quardinates.
5. 6-space as domain permits transcendence firstly uptill 4-space as dimensions and secondly as 2-space as its dimensions of dimension.
6. 6-space domain is framed two folds, firstly in terms of transcendental boundary of 12 components and secondly within a creative dimensional frame of 6-space dimensions.
7. With superimposition of origin of dimensional frame upon centre of 6-space domain, same gets sealed and acquire a status of a sealed 6-space framed.
8. A transcendence take placed at the origin fold of 6-space and take uptill 8-space as base fold.
9. Also ascendance takes place at 7-space origin from 8-space base fold for its reach though 6-space domain for manifestation as a transcendental boundary.
10. 8-space placed the role of a natural base fold for origin fold of self-referral domain.
11. 9-space placed the role of a format of 8-space as base fold and 7-space origin of 6-space domain of a transcendental boundary and a creative dimensional order.
12. The parallel artifices of values range (5, 6, 7, 8, 9) also bring to focus that end values pairs (4, 9) accepts reorganization as $(2^2, 3^2)$.

13. The values pairs (8×9) accepts reorganization as $(2^3, 3^2)$ a vertical reflection paring with base and index digit $(2, 3)$ swap their places.
14. The quadruple artifices 4, 5, 6, 7 are of alternative prime placement.
15. This range 4, 5, 6, 7, 8, 9. Firstly lead us to dimensional values ranges 2, 3, 4, 5, 6, 7, and next steps it leads us to dimensions of dimension level beings 0, 1, 2, 3, 4, 5, a zero order self-referral range.

III.

DIFFERENT ROLE OF 6-SPACE

1. 6-space accepts 13 geometric and parallel to it there are versions of hypercube 6.
2. 6-space is framed within a transcendental boundary 5-space playing the role of boundary of 6-space.
3. 5-space sets 11 geometric ranges parallel to which there are 11 versions of hypercube 5.
4. The format features of 13 geometric of 6-space and 11-geometric of 5-space.

9.

LEARNING TECHNIQUE

1. Root *vid* means 'learnt' and also its means 'to know'.
2. Ganita Sutra 1 is the source sutra and Ganita Upsutra 1 is the source of upsutra. The attainment reach of mathematical domain of Ganita Sutras is the last Ganita Sutra namely Ganita Sutra 16.
3. Likewise attainment reach of Ganita Upsutra is the last Ganita Upsutra mainly Ganita Upsutra 13. Its step before Ganita Sutra 12 is the attainment reach of learning technique itself.
4. In respect Ganita Sutras, Ganita Sutra 15 bring us face to face with the attainment reach of learning technique Ganita Sutra being Ganita Sutra 15.
5. The integrated set up of Ganita Sutras and Ganita Upsutras comes to be as gs1, ugs1, gs2, ugs2, gs3, ugs3, gs4, ugs4, gs5, ugs5, gs6, ugs6, gs7, ugs7, **gs8, gs9**, ugs8, gs10, ugs9, gs11, ugs10, gs12, ugs11, gs13, ugs12, gs14, ugs13, gs15, gs16.
6. This brings us face to face with the order of learning technique and of learning attainments being of following set up:
 - (I) Ganita Upsutra 12
 - (II) Ganita Sutra 14.
 - (III) Ganita Upsutra 13.
 - (IV) Ganita Upsutra 13.
 - (V) Ganita Sutra 15.
 - (VI) Ganita Sutra 16.

7. Let us have a pause here and take note learning technique of mathematical domain of Ganita Sutras and upsutras as its first steps is of the value of Ganita Upsutra 12.
8. One shall further have pause here and take note that Ganita Upsutra 12 is of the values of glimpsing 'Vloknam'.
9. It is the glimpsing 'Vloknam', a transcendental reach of Vloknam /dimensional spaces.
10. It is the transcendental glimpsing and imbibing of their values and virtues which complete the value domain 'Vloknam'.
11. One shall sit comfortably and permit the transcending mind to glimpse and imbibe this value domain of learning technique itself being Vloknam/transcendental glimpsing and imbibing of values and virtues of such glimpsing itself.
12. This reach of learning technique is of end attainment fruit of learning as values and virtues domain of Ganita Upsutra 13.
13. The mathematical domain of Ganita Upsutra 13 as distinctive organization format features which bring us face to face with them being of characteristics:
 - (I) The entire text is a setup of a pair of formulation.
 - (II) Each formulation is composition of a pair of sub formulation.
 - (III) The paired pairs of sub formulation, of the pair of formulation, as these are, infect are only 2 namely (a) *Gunita*, and (b) *Samachhuua*.
 - (IV) This pair of sub formulation namely '*Gunita Samachhuua*', swap their places in the composition first and second formulations of the text of Ganita Upsutra 13.

- (V) This way it can be said that they texts of first and second formulation of Ganita Sutra 13 constitute a reflection pair of formulations.
14. One may have pause here and take note that first formulation '*Gunita Samachhuua*' text is parallel to text of Ganita Sutra 15.
 15. Further that the text of second formulation '*Samachhuua Gunita*' is parallel to text of Ganita Upsutra 10.
 16. To glimpse and imbibe the values domains of these sub formulations and formulations being composed in their terms are, one shall permits the transcending mind to transcend through these sub formulations.
 17. The sub formulation Ganita, latterly mines the removal off/stripping off (*it*)/ off features (*Guna*).
 18. Let us have a pause here and to attempts comprehension and imbibing of these values, which amount to 'removal off/stripping off values (off) composition/words/sub formulations/domains.....
 19. The second sub formulation, mainly '*Samachhuua*', takes us to its internal composition organization steps as (a) *Sam* (b) *Uch* (c) *Caya*.
 20. These 3 internal composition organizations steps as sub-sub formulations latterly mean (a) equal (b) upward and (c) choice/reach.
 21. One may have pause here and attempt to comprehend and imbibe the values of sub formulation '*Samachhuua*' and bring us face to face with feature and value 'equal upward choice/reach'.
 22. Let us further have a pause here and attempts to comprehend and imbibe the combined features values of the Ganita Upsutra 13 formulation '*Gunita Samachhuua*' and same shall be bringing us face to face with 'to

- remove features of a domain', and to reclassify them as of equal upward reach.
23. One may have a pause here and permit the transcendence mind to continuously remain prolonged city of Tran and to glimpse and imbibe the values and virtues of formulation '*Gunita Samachhuua*'.
 24. It would be a blissful to take note the second formulation '*Samachhuua Gunita*' shall be taking us face to face with the values and virtues of it being 'the classified features of equal upward reach shall be stripped off', of their classification features.
 25. One may have pause here and take note that the combined reach of the entire text of Ganita Upsutra 13 bring us face to face with the attainment reach of Ganita Upsutra being, as that initially the features of a domain are to be removed 'from the domain' and the same are to be classified as per their equal upward reach. This as such becomes the first phase of the exercise here. The next phase of the exercise comes to be that the classified features as per there equal upward reach are to further stripped off of their classifications features. This as such shall be taking us to the affine state of the values of the domain as its virtues as here there has been a twice stripping off, which at the first stage amounts to stripping off feature of the domain and having their classification as per the values of equal upward reach for the removed feature . then, at the subsequent stage, the stripped off and stripped off features having classification as per the values of equal upward reach are again stripped off of binding value itself and same to be made in a virtues state free of both features and values.
 26. One shall sit comfortably and permit the transcending mind to continually remain in prolonged sitting of Trans

- and face to face with the to the transcendental affine virtues state of mathematical domain.
27. This learning reach of Ganita Upsutra would follow by the values and virtues of Ganita Sutra 14.
 28. One may have pause here and take note that values and virtues of Ganita Sutra 14 as are reflected in its working rule 'one less than before' the same amounts to a transition and transformation of the processing initiated by the working rule of Ganita Sutra 1 'one more than before'
 29. One may have pause here and take note that the working rules 'one more than before of Ganita Sutra 1 and 'one less than before' of Ganita Sutra 14, are of opposite orientation parallel to pair of orientation 'interval/line/hypercube 1' being of the format 'domain, dimensions'/(+1,-1), it would be blissful to take note it shall be bring us face to face with the learning technique sutra 15 which is parallel to first half of the text of Ganita Upsutra 13.
 30. One shall have a pause here and take note that Ganita Upsutra 13 and Ganita Sutra 14 followed by Ganita Sutra 15 parallel to half text of Ganita Upsutra 13, is the value and virtue of learning technique of Ganita Sutras and upsutras together and same deserved to be fully imbibed.
 31. With this imbibing, it would be blissful to attain the combined attainment of mathematical domain of Ganita Sutras and upsutras has is the attainment reach of Ganita Sutra 16 '*Gunaka Samchuuu*'. Which latterly means that *Guna* / feature, are to be pooled in 'ka / Brahma/ creator's domain / real four space of spatial order', to have of them a blissful reservoir of values reach as of equal upward reach features.

32. One shall sit comfortably and permit the transcending mind to continuously remain in Trans and to blissful imbibe the values and virtues of the learning technique of mathematical domain of Ganita Sutras and upsutras.

10.

GLIMPSING AND IMBIBING OF VALUES OF 6-SPACE WITHIN 5-SPACE

1. 6-space places the role of origin of 5-space.
2. 6-space contained manifests as origin fold of hypercube 5.
3. The value player (5, 6) accepts reorganization as (2+3, 2x3).
4. One shall glimpse these features and imbibe the features of 5-space domain as of progression of the format of addition operation.
5. Origin fold (6-space) of 5-space domain, in that context, leads to progression with an origin fold as of the format of multiplication operations.
6. 5-space domain accepts Sathapatya measuring rod synthesized by hypercube 1 to 5.
7. Transcendence through origin fold leads to transcendence through 6-space domain, and it as such extends Sathapatya measuring rod of hypercube 1 to 5 into Sathapatya measuring rod synthesis by hypercube 1 to 6.
8. It is this feature of transcendental domain within 5-space domain reverse to be comprehended well and to be thoroughly appreciated to imbibing these features and values completely to acquire proper insight and to attain

appropriate enlightenment of this transcendental phenomenon.

9. One may have pause here and take note that transcendence domain envelope self-referral domain.
10. The transcendental boundary of self-referral domain is a set up of 12 components.
11. One may have pause here and take note that transcendental boundary of 12 components accepts its re-origination parallel to value as $12 = 5+7$.
12. One may have pause here and take note that $(5, 5) = 7$ is the synthesis values equations of synthesis of a pair of transcendental domain synthesizing as 7-space setup.
13. Further as that 5×7 grid leads to accommodation for all the 35 double digit numbers of 6-place value system.
14. Further as that $5 \times 7 = 35$ is parallel to value of transcendental dimensions frame of 7 dimensions of unity state (7-space).
15. Further as that 7-space plays the role of origin of 6-space.
16. Still further as that $NVF(\text{orb}) = 35$.
17. Still further as that transcendental boundary of 12 components of self-referral domain manifests a format for 12 place values systems, while self-referral domain itself manifests a format fold for 6 place values systems and its 35 double digit numbers are accommodated by 5×7 grid.
18. One may have pause here and take note that 35 double digit number of 6 place value systems, organization as of 5×7 grid format lead to following arrangement for such organization:

01	02	03	04
05			

10	11	12	13
14			
15	20	21	22
23			
24	25	30	31
32			
33	34	35	40
41			
42	43	44	45
50			
51	52	53	54
55	100		

19. The transcendence within self-referral domain(6-space domain), as a origin fold of 5-space domain, shall be of format feature of reach from 6-space domain to four space dimensions, and a step head, from 4-space as dimensions to 2-space as dimensions of dimension.
20. The transcendence within 5-space domain would be of steps of features and values of a reach from 5-space domain to 3-space dimensions to one space as dimensions of dimension.
21. One may have pause here and take note that the transcendence within 5-space domain shall be a reach as linear dimensions of dimension.
22. The other hand, the transcendence within 6-space origin will be a reach at dimensions of dimension level being of a spatial dimensional format.
23. It would be blissful to take note that the transcendence head from 5-space domain shall be for a linear order through spatial order reach of the origin fold.

24. As linear order with a degree of freedom of motion within spatial order setup shall be transcending head for its reach at base fold (7-space).
25. One may have pause here and take note that the transcendence for one space will take to (-1) space while the transcendence for spatial order will be at (0) space.
26. One may have pause here and take note that (+1) space and -1 space are of opposite orientation.
27. Zero space is sandwiched in between (+1 and -1).
28. One shall have a pause here and to permit the transcending mind to glimpse and imbibe this phenomenon of transcendence within 5-space domain through 6-space origin and its reach 7-space domain.
29. One shall comprehend and imbibe all the features of existence phenomenon of 6-space within 5-space.
30. One may have pause here and take note that 6-space is a creative dimensional order space (4-space play the role of dimensions of 6-space).
31. Further as that creative dimensional frame of 6-space is setup of 6 creative dimensions (4-space as a dimensions)
32. One may have pause here and take note that 5-space plays the role of origin of 4-space.
33. As there are 6 creative dimensions, as such a set of 6 transcendental origins will be marking their presence. Here in the set up of creative dimensional frame of self-referral domain.
34. One may have pause here and take note that the 5-space accepts a solid order dimensional frame of 5 dimensions.
35. As 3-space accepts 4-space as origin, as such solid dimensional framed of 5 solid dimensions shall be accepting as many as five creative origins.

36. One may have pause here and take note that 6-space accept 13 geometric range and parallel to it there are 13 versions of hypercube 6.
37. On the other hand 5-space accepts 11 geometric range and parallel to there are 11 versions of hypercube 5.
38. It would be blissful to take note that 6x6 matrix accommodate a setup of six self-referral ranges constituting six rows as well as six column as this grid.
39. It would be blissful to take note that this grid avails whole range of 1 to 11 spaces setups.
40. It would be a blissful to take note that different role of 6 space emerge as under:
 - (I) 6-space as dimensional fold.
 - (II) 6-space as boundary fold.
 - (III) 6-space as domain fold.
 - (IV) 6-space as origin fold.
 - (V) 6-space as base fold and
 - (VI) 6-space as format fold.
41. It would also to relevant to take note that 6-space as dimensional fold creative, 7-space as boundary, 8-space as domain, 9-space as origin, 10-space as base and 11-space as format.
42. It would be a blissful exercise to tabulate distinctively the internal relationship of 6-space with 1 to 11 space.
43. One may revisit :
 - (I) 1-space leads to 6-space as format fold
 - (II) 2-space leads to 6-space as base fold
 - (III) 3-space leads to 6-space as origin fold
 - (IV) 4-space leads to 6-space as domain fold
 - (V) 5-space leads to 6-space as boundary fold
 - (VI) 6-space as a self-referral domain manifests a format of feature parallel to northern diagonal of above 6x6 grid.

44. One shall sit comfortably and permit the transcending mind to glimpse and imbibe above features and values of 6-space within 5-space and also with referral to 1 to 11 space along the format parallel to 11 versions of hypercube 5.

11.

CLASS 12 CONTENTS

1. Vedic Mathematics course.
2. Text book project.
3. Class 12 content.
4. Six space.
5. Hypercube 6.
6. Different role of 6-space.
7. 6-space mathematics.
8. 6-space domain.
9. Sathapatya measuring rod.
10. Transcendental carrier path.
11. Transcendence through six space domain.
12. Self-referral ranges.
13. Split of a self-referral range.
14. Synthesis of a pair of consecutive self-referral ranges.
15. Dynamic state six space domain.
16. 6-space sciences.
17. 6-space technology.
18. Solar universe.
19. Human frame.
20. Existence phenomenon.
21. Self-referral transcendence phenomenon.
22. 6-space format for Vedic Mathematics, Science & Technology
23. Transcendental carrier of sunlight
24. Vedas are lively within sunlight

12.

SUNLIGHT AND BLACK MATTER

1. Sunlight as half black.
2. Positive and negative dimensional orders
3. Zero number of dimensions.
4. Positive and negative numbers of dimensions.
5. Holes and pillars.
6. Sealed and unsealed 6-space domains.
7. Transcendence through unity state origin.
8. Reach at natural base.
9. Brahman format.
10. Sun and pole star.
11. Versions of hypercube 5 and 13 versions of hypercube 6 and 15 versions of hypercube 7.

13.

**SATHAPATYA MEASURING ROD AND
SHAD CHAKRA FORMAT**

1. Sathapatya measuring rod and shad chakra format.
2. Boundary component and external characteristics.
3. Backbone and split of a three dimensional frame and value 33.
4. 32 teeth and 32 external Devas and 32 coordinate fixations.
5. Vedic Mathematics processing formats:
 - (I) Arithmetic on algebraic format.
 - (II) Algebraic on geometric format.
 - (III) Geometric on manifestation format.
 - (IV) Manifestation on transcendence format.
 - (V) Transcendence on self-referral format.
 - (VI) Self-referral transcendence on unity state format.
 - (VII) Unity state on natural format.
 - (VIII) Natural state on Brahman format.
 - (IX) Brahman format on Par Brahm format.

14.

NUMERALS 1 TO 9 AND PLACE VALUE '0'

1. Ten place value system works with nine numeral range and place value '0'.
2. Creative boundary of 10 components manifests as 10 place values formats.
3. Take off and creative boundary structure outer space as self-referral domain.

SECTION-8

CONTENTS

1. Let us re-visit we have been exposed to during this four year schooling
2. Ashvain kumaro
- 3.

SECTION-8

1

LET US RE-VISIT WE HAVE BEEN EXPOSED TO DURING THIS FOUR YEAR SCHOOLING

1. Exposure though phased is sequential to reach 6-space by beginning with 3-space.
2. Exposure has been along geometric formats of hypercube 3, 4, 5, 6 being manifestations of 3, 4, 5, 6 contents as domain folds of hypercube 3, 4, 5 & 6 respectively.
3. These geometric formats permit chase in terms of artifices of numbers, four in numbers, being consecutive, and these together make a range of II value steps: (-1, 0, 1, 2, 3, 4, 5, 6, 7, 8, 9).
4. Phased these take up till hyper cubes as dimensional roles reach of -1 space to 6-space:
(-1, 0, 1, 2), (0, 1, 2, 3), (1, 2, 3, 4), (2, 3, 4, 5), (3, 4, 5, 6), (4, 5, 6, 7), (5, 6, 7, 8), (6, 7, 8, 9).
5. Ganita Sutras composed formulations accept transcendental code values with $1=8$ brings to focus the cyclic potentialities values of Vedic Mathematics systems.

6. Vedic systems values reservoir 'one' and its Synomn Parnava, as flow reach, settles the coverage range of Ganita Sutras and Ganita Upsutra values.
7. Vedic Mathematics system along Sathapatya measuring rod synthesis by hypercube 1 to 6 stand initiated as sole syllable OM and has a reach uptill 'Tasya Vachka Parnavah'.
8. Om tat sat iti Nirdhesha is the attainment command of this system.
9. Systems beginning with and having end reach as well at Devnagri alphabet becomes self-referral because of which feature Ganita Sutras (and upustras) unfold from within and make to system a self-sustained domain.
10. Ganita Sutra 1 has 'OM' as its transcendental source reservoir.
11. End reach is the Parnava reservoir.
12. Processing features of Vedic Mathematics are of values of chase of arithmetic upon algebraic format, algebraic on geometric format, geometric on manifestations format, manifestation themselves along transcendence format as self-referral range along unity state set-up within. Natural folds being foundation by Brahman values lively within virtuous Par Braham.

2

ASHVAIN KUMARO

1. Ganita Sutra 1 is a complete scripture in itself.
2. It is composition of a pair of words formulation.

3. This pair of formulation avail 9 & 7 letter respectively. The gap between the last letter of first formulation and the first letter of second formulation is bridge by the values of 'Ashvain Kumaro'.
4. Ashvain Kumaro is pair of physicians of gods.
5. The formulation 'Ashvian Kumaro', itself is pair of formulations.
6. These formulations accepts transcendental code values (21, 26) respectively.
7. These values or the pair of values reaches up till sun (6-space) and to transcend ahead there from.
8. Value 21 permit re-organization as $21 = (1+2+3+4+5+6)$.
9. Value 26 permit re-organization as $26 = (5+6+7+8)$.
10. The continuity is attainable as of values steps (1, 2, 3, 4, 5, 6, 7, 8, 9, 10,).
11. First six steps reach beginning from value 0, sequentially takes us up till value $1+2+3+4+5+6 = 21$.
12. It is a reach up till 6-space (domain).
13. 6-space domain is enveloped by 5-space.
14. With it reach comes to be of value $21+5 = 26$.
15. 5-space itself is enveloped by 4-space boundary of ten components.
16. This is sequentially reachable in five steps from value 0 as 2, 4, 6, 8, 10.
17. With these steps are filled the gaps which are achieved by transcendence from value 26 onwards with the value steps 6, 7, 8, 9, 10, 11.
18. This way there comes to be reach at values 32, 39, 47, 56, 66, 77.
19. The values range (0, 1, 3, 6, 10, 15, 21) as first limb and value range (77, 66, 56, 47, 39, 32, 26) will lead to their paired pairs values (77, 67, 59, 53, 49, 47, 47).

20. One may have pause here and take note that sequential gaps values of this paired pairs sequential comes to be value range (10, 8, 6, 4, 2, 0).
21. One may have pause here and take note that the text of Ganita Upsutra 1 avails ten letters.
22. Further as that transcendental code value of the texts of single word formulation of Ganita Upsutra 1 is 42.
23. One may have further have pause here and take note that value 42 is the synthesis value of a pair of spatial order dimensional ranges (2, 3, 4, 5, 6) and (2, 3, 4, 5, 6).
24. Being a spatial order, it shall be providing synthesis joint value '2'.
25. One may have pause here and take note that the text of Ganita Sutra 1 is a pair of word formulation.
26. The first letter of first formulation accepts transcendental code value '6'.
27. The first letter of the second formulation accepts transcendental code value '5'.
28. The last letter of first formulation accepts transcendental code value '1'.
29. The last letter of second formulation also accepts transcendental code value '1'.
30. With it the range of first formulation is from value six to value one.
31. Likewise the range of second formulation is from five to value 1.
32. Here, it also would be relevant the eight letter of first formulation accepts transcendental code value 8 which lead to value $(8 \times 5 / 2) = 20$ and as such $20 + 1 = 21$ is the reach in this case.
33. One shall sit comfortably and permits the transcending mind to glimpse and imbibe the values of above features and maintains of continuity.

2.10.2017

3-SPACE BOOK

LESSONS

SECTION 1

13. Cube
14. Seven version of cube
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17. Of linear and spatial dimensions
18. Dimensional frame split
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20. Synthesis of half dimensional frames
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SECTION 3

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14. Cubes sequence ($1^3, 2^3, 3^3, 4^3, \dots$)

15. Sequential split of cube into sub cubes, sub-sub cubes,

...

16. Ninth sub cube, sixty-fifth sub sub cube, ...

17. Structural set up of Synthesis of cubes

18. Right angle triangle (3,4,5,6)

19. Perfect numbers (6,28,496,8128)

20. linear order Dimensional synthesis

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22. difference values sequence of linear and spatial
dimensional synthesis values

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24. 3-space domain split

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12. Ganita Sutra 1 and Ganita Upsutra 1

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19. Geometry on manifestation format

20. Exercises

21. Ganita Sutra 4 and Ganita Upsutra 4

22. Transcendence through manifestation

23. Exercises

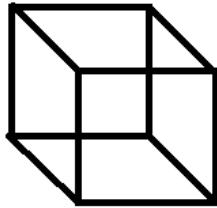
3-SPACE VEDIC MATHEMATICS, SCIENCE & TECHNOLOGY

SECTION 1

STRUCTURAL SET UP OF CUBE

LESSON-1

CUBE

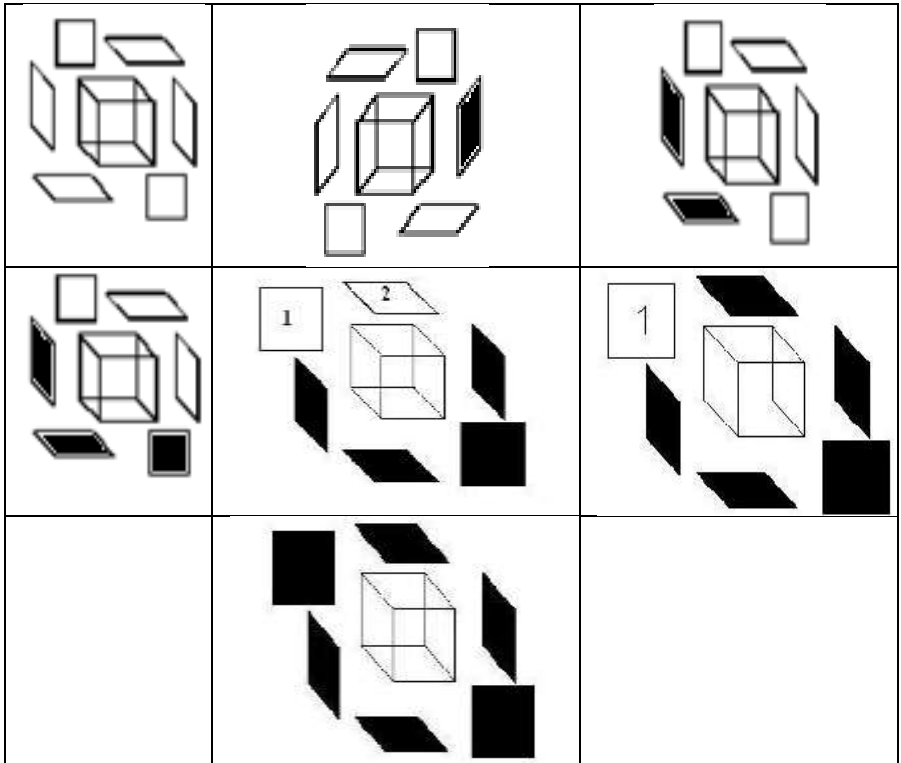


1. Let us visit and revisit the 'cube'.
2. Let us visit and revisit the cube to have a glimpse of its structural set up.
3. It brings us face to face with 'volume' being within a geometric envelop.
4. The geometric envelop of the volume is stitched by
 - (i) 8 corner points
 - (ii) 12 edges, and
 - (iii) 6 surfaces
5. This set up of '8 corner points, 12 edges and 6 surfaces', together make a structural set up of triple features, namely of 'points, lines and surfaces'.
6. Let us visit and revisit 'point, line and surface'.
7. 'Surface' is of features of 'length and breadth'.
8. Here, in case of 'surface', third axis is not play its role.
9. It may be taken as that surface has a pair of axis.

10. Simultaneously it may be view as that here, third axis, namely height is missing.
11. This may be taken as that here there is presence of a pair of axis while there is an absence of one axis.
12. The same may be express as '+2, -1' as that there is a presence of 2 axes and also simultaneously, there is an absence of 1 axis.
13. Now let us visit 'line'.
14. It has length, while area and volume are missing.
15. It is so, as here there is a presence of one axis and there is an absence of 2 Axis.
16. It would permit expression as '+1, -2'.
17. Now let us visit a 'point'.
18. Here, 'Length, Breadth, Volume' are missing.
19. In the set up of a point, neither of the 3 axes is playing its role.
20. As such, point permits expression as '0, -3'.
21. One may have a pause here and take note that, 'volume' is the set up where all the 3 axes are playing their roles.
22. It is accepting expression as '3, 0'.
23. One may have a pause here and take note that the above features also bring us face to face with the values as that the cube, with its volumes as one structural component and its geometric enveloped being of $(8+12+6) = 26$ structural component, together make cube as of '27' structural components.
24. These 27 structural components together with 4 structural component of a 3 dimensional frame of 3 dimensions and one origin, shall be leading us to this set up being of $27+4 = 31$ structural components.
25. It would be blissful to take note that NVF (CUBE).
26. It would be blissful to take note that $27 = 3^3$, a third member of the sequence $(1^3, 2^3, 3^3, 4^3, \dots)$. ■

LESSON-2

SEVEN VERSIONS OF CUBE



1. 'Cube' has 6 surface plates.
2. The presence and absence of these surface plate, make a range of following 7 versions:-
 - (i) Cube with its all the six surface plate being intact.
 - (ii) This version permit expression as 6×0 to express about the presence of 6 surface plates and absence of '0' number of plates.

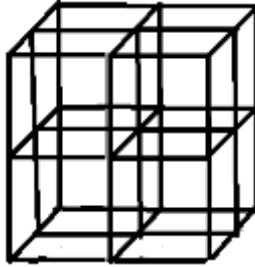
- (iii) Cube with its only 5 surface plates being intact, and 6th surface plate being absent, makes another versions of the cube which would permit expression as (5, -1) implining that it is expression to mark the presence of 5 surface plate and absence of 1 surface plate.
 - (iv) Next version on the cube would be with its only 4 surface plate is being intact and remaining 2 surface plates being absent and the same would permit expression as (4, -2).
 - (v) Like that, we shall be reaching at a range of 7 versions of the cube being (6, 0), (5,-1),(4, -2), (3, -3), (2, -4), (1, -5) and (0, -6)
3. The another way to approach these 7 versions of cube is to view as that the first version of the cube is which is not having any of its surface plates being intact, and then second to seventh version of the cube shall be sequentially having (1, 2, 3, 4, 5 and 6) surface plates intact.
 4. Still another way to glimpse and to reach at this range of seven version range would be begin with the cube which has half number of plates (means, 3 surface plates being intact) and another half number of plates (means, 3 plates) being missing.
 5. Then we can sequentially proceed on either side of the range from (3, -3) version, by having sequential addition and removal of the surface plate for this middle placement version.
 6. Taking, the above middle placement version, being of (3, -3) = 0 signature version, we shall be reaching at 7 signature range of seven versions of the cube being (-3, -2, -1, 0, 1, 2, 3) signature range.

7. Orientation wise above range may be of expression as (3, 2, 1, 0, -1, -2, -3).
8. One may have a pause here and take note that these seven versions of cubes, together shall be availing $(6+5+4+3+2+1+0) = 21$ number of surface plates.
9. It also would be blissful to take note that number value 21 permits re-organization as $21 = 1 \times 3 \times 7 = 3 \times 7$.
10. It would be blissful to take note that Arthrav Ved in its very first quarter of first mantra enlightens with formulation 'trishapta, which laterally means 3 and 7, and one of the value of this formulation brings us face to face with cube, (3-space body), being of seven versions.



LESSON 3

EIGHT OCTAVES



1. It is going to be a blissful exercise to cut a soap-cake (cube) into 8 part (8 sub cubes) by having 3 cuts with a knife blade by using it parallel to 3 axes.
2. This cut (split) of soap cake (cube) into 8 parts (8 sub cubes) is there as a split of 3-space into 8 octants format
3. One shall chase this split of cube into eight sub cube, parallel to it the split of 3-space into 8 octants, in three sequential steps:-

FIRST STEP:- knife blade shall be put along X-axis of the top surface of the cube and same shall be taken along the vertical axis till its reach uptill the X-axis of the bottom surface of the cube it shall be a cutting the cube the soap cake into two block.

SECOND STEP:- Now the knife blade put along the Y-axis of the top surface of the cube (as a set up of both blocks reached at during first step).

The knife blade shall be taken through both the block uptill Y-axis of the bottom surface.

It shall be resulting into split of both blocks of first stage cut, into two sub-blocks of each block.

There by there would be a reach at quadruple sub blocks.

THIRD STEP:- Now the knife edge be put along the third axes Z axes, of the 3 dimensional frames and there shall be cut up-till the reach at the Z-axis along the opposite surface.

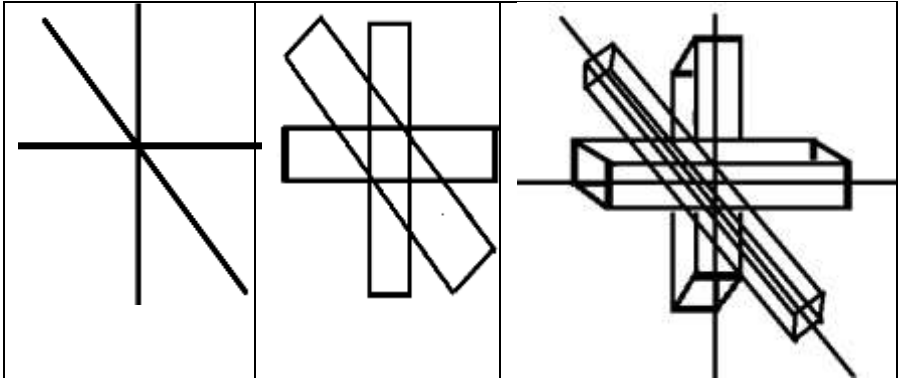
As a result each of the quadruple sub-block shall be splitting into a pair of parts and thereby would be a reach at eight parts of soap cake (8 sub cubes of cube).

4. This reach at the split of cube into 8 sub cubes shall be bringing us face to face with the reach at the split of 3-space itself into eight octants.
5. One shall sit comfortably and to glimpse and imbibe this happening of parallel split of cube into 8 sub cubes, on the one hand, and of 3-space into eight octants, on the other hand.
6. One shall further sit comfortably and to glimpse and imbibe as to how the knife blade which is of spatial (surface) set up, is playing its role parallel to the linear set ups of axes of the 3 dimensional frames.
7. It would be very blissful to construct parallel to linear axis of 3 dimensional frames, the set up of a 3 dimensional frames of 3 spatial (surface/ planes) axes.



LESSON 4

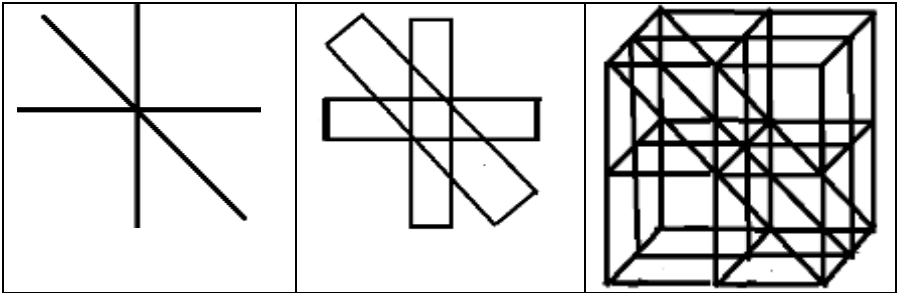
THREE DIMENSIONAL FRAME



1. 3 dimensional frames may be define and accepted as a set up of 3 distinct linear axes, which are not complainer but are meeting at common in between point of the axes.
2. The non coplanar feature of 3 axes means that all the 3 of them cannot be of complete placement with a single plane.
3. The in between common meeting point of axis means that each axis extends along both sides of the meeting points.
4. The said meeting point of the axis is designated as origin of the 3 dimensional frames.
5. With it, 3 dimensional frames becomes a set up of 3 linear axis and 4th origin.
6. The origin split each axes into two parts;
7. With it, triple axes lead to a set of six parts, individually designated as half dimensions (half axis).

8. In the light of the above, 3 half dimensions of 3 axes, together with the origin shall be constituting a 3 dimensional frame of half dimensions.
9. One may have a pause here and take note that, a 3 dimensional frame of full dimension leads to a pair of 3 dimensional frames of half dimensions.
10. One may further have a pause here and take note that both 3 dimensional frames of half dimensions shall be having a common origin.
11. It would be a blissful exercise to glimpse and imbibe the existence of a 3 dimensional frame of half dimensions.
12. Let us revisit the set up of the cube and we shall be finding that each corner points of the cube is embedded a 3 dimensional frame of half dimensions.
13. It is this feature and the existence phenomenon of a 3 dimensional frames of half dimensions, which deserves to be comprehended well.
14. It would be a blissful exercise to revisit the set up of a 3 dimensional frame of full dimensions as a synthesis set up of a pair of a 3 dimensional frames of half dimensions being of opposite orientation.
15. It is this feature of the set up of a 3 dimensional frame, which deserves to be comprehended well, particularly in reference to the orientations of a pair of half dimensions of a dimension.
16. It would be a blissful exercise to revisit the set up of a 2 dimensional frame as a synthesis set up of a pair of 2 dimensional frames of half dimensions of opposite orientations.
17. A step ahead, one shall visit the set up of a one dimensional frame as a synthesis set up of a pair of one dimensional frame of half dimensions of opposite orientations. ■

LESSON-5
OF LINEAR AND SPATIAL DIMENSIONS



LINEAR DIMENSION:-

1-space playing the role of dimensions is designated as linear dimension.

LINEAR AXES:-

Line, the 1-space body, as dimension is designated as linear axis.

LINEAR ORDER:-

The 3-space bodies creation by linear dimension is designated as linear order creation.

SPATIAL DIMENSION:-

2-space playing the role of dimensions is designated as spatial dimension.

SPATIAL AXES:-

Plane, the 2-space body, as dimension is designated as spatial axis.

SPATIAL ORDER:-

The 4-space bodies creation by spatial dimension is designated as spatial order creation.

3 DIMENSIONAL FRAME:-

3 dimensional frame of linear order is a set up of 3 linear dimensions and origin. Each of the 3 linear dimension accepts a spatial base.

LINEAR DIMENSIONAL FRAME WITH SPATIAL BASE:-

As each Linear dimension is having a spatial dimension as its base, as such linear dimensional frame is designated as a dimensional frame of spatial base.

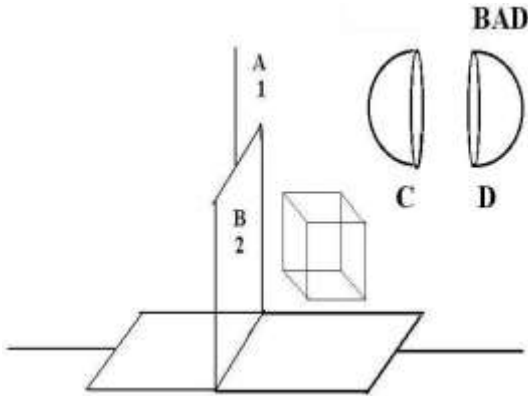
LET US REVISIT SET UP OF CUBE:-

Let us revisit the set up of the cube and we shall be face to face with its linear dimensional frame being of a spatial base. It is because of this that cube split into 8 sub cubes and 3-space split into 8 octants. Further, it is because of this feature that centre of cube accepts a dual status, firstly as like any other point of the cube and secondly the centre be uniquely distinct than all other points of the cube as that centre is equi-distant from all the corner points while no other point of the cube as this feature.

It would be blissful to re-chase set up of cube firstly with three linear dimensions, and secondly in-terms of 3 spatial dimensions. ■

6

DIMENSIONAL FRAME SPLIT

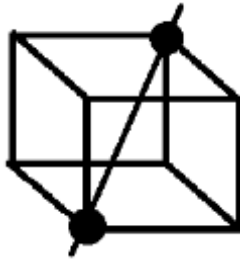


1. Let us revisit the set up of the cube.
2. Each corner point of the cube is a meeting point of 3 edges.
3. These 3 edges which meet at the corner point, as such are half dimensions.
4. These 3 edges (as half dimension), together constitute a 3 dimensional frame of half dimensions, with corner point as the origin of this dimensional frame.
5. This dimensional frame of 3 half dimensions, together with the corner point as there meeting point, as origin, makes a 3 dimensional frame of half dimensions.
6. It would be a blissful exercise to extend said 3 edges in the space outside the cube.
7. With this extension, each half dimension will become full dimensions.
8. In this extended form, will stand constructed a 3 dimensional frame of full dimensions.

9. Likewise a 3 dimensional frame of full dimension can be constructed at each corner points as origin of this dimensional frame.
10. One may have a pause here and, take note that, this way, there would stand constructed, as many as, 8 three dimensional frame of full dimension.
11. It would be blissful to take note that each have so constructed three dimensional frame of full dimension, its split shall be leading us to a pair of 3 dimensional frame of half dimensions.
12. It would further be blissful to take note that of these 16 three dimensional frame of half dimension, 8 of them are within cube, while remaining of 8 them are in space outside the cube.
13. This phenomenon of a split of a three dimensional frame into a pair of three dimensional frame of half dimension, deserves to be comprehend well.
14. It would be a blissful exercise to extend a 3 dimensional frame of half dimension into a three dimensional frame of full dimension.
15. It would further be a blissful exercise to split a three dimensional frame of full dimensions into a pair of 3 dimensional frame of half dimensions.



QUADRUPLE INTERNAL DIAGONALS



1. Let us revisit the structural set up of the cube.
2. Of this structural set up, let us have a focus upon the internal structural set up of cube, that is , upon the structural set up of the volume of the cube.
3. The three dimensional frame with origin at the centre of the cube is one feature which deserves to be comprehend well.
4. The ten directional frame accepted by the volume of the cube is an another feature of the cube which deserves to be comprehend well.
5. The other feature, which deserves to be comprehend is the set of quadruple internal diagonals of the cube.
6. These diagonals pass through centre of the cube.
7. Each diagonal coordinates a pair of corner points.
8. The pair of corner points and the centre, as such make a 3 point fixation for a diagonal of the cube.
9. All the 8 corner points of the cube are coordinated by the quadruple diagonals of the cube.
10. These diagonals are designated as the internal diagonals of the cube.

11. One may have a pause here and take note that end point of the diagonals are superimposed upon the respect corner points of the cube.
12. Further as that, each corner points of the cube is the origin of the respective three dimensional frame of half dimensions embedded in the corner point.
13. It would be a blissful to take note that pair of 3 dimensional frames of half dimensions (embedded in the respective end points of the respective diagonal) are of dimension of opposite orientation.
14. This feature (of dimensions being of opposite orientation) makes these said pair of 3 dimensional frames, as both of them being of inward orientation towards centre of the cube.
15. This structural set up of said pair of 3 dimensional frame, as such, avail respective diagonal as there translation path.
16. Both these dimensional frames, translate along this path of diagonal format and the translation beginning with the end point of the diagonal / corner point of the cube. Processes towards the centre of the cube.
17. It would be a blissful to take note that with reach at centre of the cube, this pair of dimensional frames acquire a synthetic set up of a 3 dimensional frame of full dimensions.
18. It is this feature of this translation which deserves to be comprehend well.
19. Such synthetic set up along each diagonal, that way will make available a set of quadruple synthesized three dimensional frame of full dimensions.
20. It would further be blissful to take note that these quadruple three dimensional frame of full dimensions together with three dimensional frame of full dimension

origin at the center come already available makes availability of as many as five 3-dimensional frame of full dimensions.

21. Each of these five 3-dimensional frame of full dimension makes a solid dimension (3-space in the role of dimension).
22. Further at that, these five solid dimensions, together constitute a solid dimensions frame of five dimensions of 5-space.
23. These features deserve to be comprehend well. ■

SYNTHESIS OF HALF DIMENSIONAL FRAMES

1. Synthesis of half dimensional frames deserves to be chased for its full appreciation and complete comprehension.
2. One way to chase it would be to follow the translation of pair of three dimensional frames of half dimensions from the corner points of a given internal diagonal till their reach at the centre of the cube (middle point of the diagonal).
3. One shall have a pause the movement the both of this pair of three dimensional frames of half dimensions reach at centre of the cube (middle of the diagonal).
4. This phase and stage, is going to be feature and values:
 - (i) Origins of both three dimensional frames of half dimensions gets super imposed upon centre of the cube (middle point of the diagonal).
 - (ii) Three pairs of half dimensions of opposite orientations of same dimension gets synthesized as a set of three full dimensions together making a three dimensional frames.
 - (iii) From the centre there happens to be a structural flow along each diagonals along its both orientations.
5. The angular placement of diagonal in refenece to three dimensional frames with origin at the centre being responsible for split of the cube into 8 sub cubes by availing spatial base of three linear axes, deserves to be comprehended well.

6. The continuation of translation for both three dimensional frame of half dimensions, ahead a centre of the cube / middle of the diagonal, shall be sequentially have a reach uptill the opposite corner points.
7. One may have a pause here and to permit the mind to glimpse this happening of a three frame of half dimensions beginning translation from a given corner point and attaining reach at the other end point of the diagonal super imposed upon respective corner of the cube.
8. It would further be blissful to chase and comprehend further translation which shall be taking in the outward space making it a synthesis phenomenon of construction of a three dimensional frame of full dimensions at the second end point of the diagonal.
9. One shall chase this translation firstly beginning with the first corner point fo the diagonal having is reach uptill centre of the cube / middle point of the diagonal and secondly beginning with centre of the cube/ middle point of the diagonal and attaining the second end point of the interval.
10. It would be a blissful exercise to chase this 2 phased translation for all the three dimensional frame of half dimensions embedded in all the 8 corner points cube.



TEN DIRECTIONAL FRAME

1. It will be blissful exercise to fix the cube the cube in terms of ten directional frames.
 - (i) East is the first direction.
 - (ii) East-South is the second direction
 - (iii) South is the third direction
 - (iv) South-West is the fourth direction
 - (v) West is the fifth direction
 - (vi) West-North is the sixth direction
 - (vii) North is the seventh direction
 - (viii) North-East is the eight direction
2. Of these East-South, south-west, west-north and north-east are designated as sub directions while above eight directions are formatted along the axes and diagonals of plane.
3. Ninth and tenth directions are formatted vertically upward and vertically downward along the third axes of a three dimensional frame with first two axes making a plane of eight directional (a set up of four direction and four sub direction).
4. It would be relevant to take note that the quadruple direction namely east, south, west and north are formatted along the pair of half dimensions of first axis and pair of half dimensions of second axis of the plane (2-space).
5. It also would be relevant to take note that 2-space accepts a synthetic format of a pair of two dimensional frames of half dimensions of opposite orientations.

6. It is this set up which makes north and south a pair of direction of the format of opposite orientation fo a pair of half dimensions.
7. Likewise, east and west as well accepts format of a pair of half dimensions of opposite orientations.
8. The quadruple sub direction, together as well get a formatting parallel to the set up of a two dimensional frame of full dimension being a synthetic set up of a pair of 2 dimensional frames of half dimensions.
9. One may have a pause here and take note that the pair of diagonals of a square (plane) as well constitute a two dimensional frame of full dimensions of a synthetic format of a pair of two dimensional frames of half dimensions.
10. It would further be a blissful exercise to approach ninth and tenth direction as a format of a dimension, as a synthetic set up of a pair of half dimensions of opposite orientations.



10

NINTH SUB CUBE

1. The translation along the diagonals of 3 dimensional frames of half dimensions from the corner points and their reach at the centre of the cube, creates a set up of centre of the cube getting superimposed by the origins of eight 3 dimensional frames of half dimensions.
2. Further translation, in a way would amount to making of the set up of the cube as a set up of eight sub cubes.
3. With each sub cube, as well being of structural format of a cube itself, it shall be making spilt for each sub cube as well being of eight sub-sub cube.
4. Each sub cube shall be having a inner most sub-sub cube with inner most corner being of placement at the centre of the cube itself.
5. Eight sub-sub innermost cubes of all the eight sub cubes, together synthesized the set up of a sub cube.
6. This synthetic sub cube of inner most eight sub sub cubes of eight sub cubes, is designated as the ninth sub cube.
7. One may have a pause here and take note that it is because of this ninth sub cube, with centre superimposed upon the centre of the original cube, because of which every point cube is full of the entire structure of the cube.
8. It is this feature of the structural set up of the cube, which deserves to be comprehended well.

9. It is this structure of the sub cube, which also brings face to face with the centre being the seat of the origin being enveloped by solid boundary of eight components.
10. It further bring us face to face with the distinctive feature of the origin of 3-space with 3-space itself remaining at the boundary of the origin.
11. It is this distinctiveness which takes us a head of 3-space, to 4-space and higher spaces compactified at the centre of the cube as a seat of origin.
12. Reach from 3-space to 4-space, conceptually is a reach by way of transcendence from 3-space to 4-space.
13. It is a reach from cube enveloped within spatial boundary to hyper cube 4 enveloped within solid boundary.
14. One shall sit comfortably and to permit the mind to comprehend the features and values of the set up of the 9th sub cube and sequential reach steps uptill the centre of the cube as a seat of origin of 3-space.



3-SPACE VEDIC MATHEMATICS, SCIENCE & TECHNOLOGY

SECTION-2

LESSON-1

CUBE AS HYPER CUBE 3

HYPER CUBE:-

1. Hyper cube is a set up of four folds, namely
 - (i) Dimensional fold
 - (ii) Boundary fold
 - (iii) Domain fold, and
 - (iv) Origin fold
2. Dimensional fold leads to the dimensional frame for the domain fold.
3. Boundary fold leads to geometric envelop of the domain fold.
4. Domain fold is a manifested space content within geometric envelop and the dimensional frame.
5. Origin fold is enveloped within the domain fold as point space content of the next dimensional space.

MANIFESTATION LAYER:-

1. Hyper cube is a four folds manifestation layer of four consecutive dimensional spaces respectively playing the role of dimensional fold, boundary fold, domain fold and origin fold.
2. Four folds manifestation layer with N-space content playing the role of dimension (N+1 space), playing the role of boundary fold, (N+2) space playing the role of

- domain fold and $(N+3)$ space content playing the role of origin fold is designated as hyper cube $(N+2)$.
3. One may have a pause here and take note that it is the domain fold, which plays prominent role in manifestation of manifestation layers, and as such, it is designated and conceptually approached in terms of domain fold, as in the above expression, the four fold manifestation layer of quadruples values $(N, N+1, N+2, N+3)$ / (N -space content, $N+1$ -space content, $N+2$ -space content, $N+3$ -space content) is being taken as a focus upon $(N+2)$ space content manifesting as domain fold.
 4. It would further be relevant to take note that N -space content as domain fold of hyper cube N , here in reference to $(N, N+1, N+2, N+3)$ manifestation layer of hyper cube $N+2$ is playing the role of dimensional fold.
 5. Likewise $N+1$ -space content as domain fold of hyper cube $N+1$ plays the role of boundary fold of four folds manifestation layer $(N, N+1, N+2, N+3)$ of hyper cube $N+2$.
 6. And, $N+3$ space content as domain fold of hyper cube $N+3$, here plays the role of origin fold of four folds manifestation layers $(N, N+1, N+2, N+3)$ of hyper cube $N+2$.
 7. One may further have a pause here and take note that the space content as domain fold plays different roles as dimension fold, boundary fold and origin fold of respective hyper cubes.
 8. It would further be blissful to take note that each space content manifest as domain folds, and the same as domain fold plays the roles of other folds like dimension fold, boundary fold and origin fold for respective hyper cubes.

9. 4 folds manifestation layer ($N, N+1, N+2, N+3$) for $N=1$ as (1, 2, 3, 4) is the four folds manifestation layer of hyper cube 3.
10. Here, one space content plays the role of linear dimension / axis.
11. Two space contents play the role of spatial boundary.
12. Three space contents manifests as domain fold / solid domain (volume).
13. 4-space content plays the role of origin fold.
14. One shall revisit the above feature of hyper cube 3 as a four folds manifestation layers (1, 2, 3, 4) / (1-space as dimension / axis, 2-space as spatial boundary, 3-space as solid domain / volume and 4-space as origin), as is the set up of the cube.
15. It will blissfully bring us face to face with the set up of the cube being of the format of hyper cube.
16. It is this comprehension as that cube is hyper cube 3, which shall be imbibed fully.
17. It is with the imbibing of these features and value of the set up of the cube as hyper cube 3, which shall be leading to proper insight and appropriate enlightenment about 3-space Vedic Mathematics, Science & Technology.



LESSON-2

LINEAR DIMENSIONAL ORDER

1. Linear dimensional order is there because of one space content plays the role of dimension.
2. Linear dimensional order is there as linear axis constitutes a dimensional frame.
3. Linear order creates four folds manifestation layer (1, 2, 3, 4) / (1-space as dimension, 2-space as boundary, 3-space as domain and 4-space as origin) of hyper cube 3, the representative regular body of 3-space.
4. One may have a pause here and take note that representative regular body does not prefer any dimension over any other dimension of the dimensional frame of the body.
5. Cube is the representative regular body of 3-space.
6. Sphere is also another representative regular body of 3-space.
7. Linear dimensional order leads to synthesis of linear dimension, sequentially yielding value (1) for single dimension, value $(1+2) = (3)$ for a pair of dimensions, value $(1+2+3) = 6$ for triple dimensions, value $(1+2+3+4) = 10$ for quadruple dimensions and so on the value for N dimensions comes to be $(1+2+3+4+\dots+N) = N(N+1)/2$.
8. One shall, for the present, accept by way of definition, the above linear dimensional synthesis values sequence as (1, 3, 6, 10, 15, 21, ...) of synthesis values of single, double, triple, quadruple and higher number of dimensions.

9. This feature will help us appreciate the parallel formats of mathematics of artifices of numbers and of dimensional axes.
10. The quadruples values (1, 2, 3, 4) and parallel to it quadruple manifestation folds (1-space as dimension, 2-space as boundary, 3-space as domain, 4-space as origin) will also bring us face to face with the role of single axis as dimensional fold, pair of axes as boundary fold, triple axes as domain fold and quadruple axes as origin fold.
11. It would further bring us face to face with the role of $(1+2) = 3$ and the linear dimensional frame being of three dimensions set up.
12. Further $(1+2+3) = (6)$ will bring us face to face with the spatial boundary being of six surface plates.
13. Still further $(1+2+3+4) = (10)$ will bring us face to face with ten directional frame for the domain fold creations of linear order.
14. Here it would be relevant to take note that ten direction frame accepts 8 directions (of a pair of dimensions set up) + 2 directions (along third directional as upward and downward direction).
15. Here it would be further relevant to take note that three space domain (volume of cube) permits split as eight sub cubes.
16. One shall comprehend and imbibe above values of a linear order creation of cube as hyper cube 3 of four folds manifestation layer (1, 2, 3, 4).



LESSON-3

SPATIAL BOUNDARY

1. Spatial boundary is the second fold / boundary fold of four folds manifestation layer (1, 2, 3, 4) of hyper cube 3.
2. The domain-boundary ratio of hyper cube 3 permits expressing as $a^3:6a^2$.
3. One may have a pause here and take note that square (as hyper cube 2 being the four folds manifestation layers (0, 1, 2, 3) accepts domain-boundary ratio as $a^2:4a^1$.
4. Further interval as hyper cube 1 being a four folds manifestation layer (-1, 0, 1, 2) accepts domain-boundary ratio as $a^1:2a^0$.
5. One may have a pause here and take note that the domain-boundary ratio of interval (hyper cube 1), square (hyper cube 2) and cube (hyper cube 3) accepts common formulation $a^N:2na^{N-1}$, $N = 1, 2, 3$.
6. It would be blissful to take note that the above domain-boundary ration formulation is equally applies to hyper cubes four onwards as well.
7. Domain-boundary ratio formulation $a^N:2na^{N-1}$ deserve to be appreciated and comprehend for value $N = 4$ in respect of hyper cube 4 being $a^4:8a^3$.
8. It would be a blissful exercise to sequentially chase boundary folds of interval hyper cube 1, square hyper cube 2, cube hyper cube 3 and hyper cube 4.
9. The distinct role of the spatial boundary fold, distinct then that of solid domain deserves to be comprehend well for its proper appreciation and for complete imbibing of its values.

10. Here it would be relevant to take note that hyper cube 3 is a linear order set up while hyper cube 2 is a zero order set up. ■

LESSON-4

SOLID DOMAIN

1. Solid domain is the third fold of hyper cube 3 being a four folds manifestation layer (linear dimension, spatial boundary, solid domain, creative origin).
2. Solid domain is a set up of 3-space content lump manifesting as domain fold of hyper cube 3.
3. At centre of solid domain is the seat of creative origin (fourth fold of hyper cube 3).
4. One feature of solid domain is that it manifests with in a three dimensional frame of three linear dimensions.
5. It second feature of solid domain is that it accepts a geometric envelop of spatial boundary.
6. Third feature of solid domain is that it is having a seat of creative origin at its centre.
7. The creative origin at centre of solid domain is a point body of 4-space.
8. The three dimensional frame with its origin at centre of the cube, that way seals the domain fold.
9. We may formally define 'sealed solid domain as a solid domain with its origin being is in a sealed state because of super imposition of the origin of three dimensional frame at centre of the cube being the seat of the origin fold of hyper cube 3.
10. One may have a pause here and to properly appreciate and to comprehend the distinctive features of a sealed

- three dimensional domain from that of a three dimensional frame with unsealed origin.
11. The other feature of cube (three dimensional domain) is that cube splits into eight sub cubes, parallel to the split of 3-space into eight octants.
 12. It would be blissful to take note that, a step ahead, sub cube as well, permits a split into eight sub-sub cubes.
 13. And this sequential split of cube into sub cubes and sub cubes and sub-sub cubes and so on is of add-infinitum steps.
 14. The sequential values sequence $(8^1, 8^2, 8^3, 8^4, \dots)$ deserves to be chased parallel to the values sequence $(a^1, a^2, a^3, a^4, \dots)$.
 15. It would be relevant to take note that transcendental code value of *Akash* is '8'.
 16. Further as that, the transcendental code value of formulation *Ek* as well '8'.
 17. Still further as that, transcendental code value of formulation *triya* is also '8'.
 18. And, formulation *iti* two accepts transcendental code value '8'.
 19. The value $8 = 2^3$ will help us appreciate and comprehend this value in reference to the value $1 = 1^3$.
 20. Here it would be relevant to take note that Shakala Rig Ved Samhita is a scripture of 8 Ashtaks and 64 Chapters.
 21. Further as that, the text of Ganita sutras and upsutras is a text of 512 expressed letters + 7 unexpressed letters + 1 un manifests letter.
 22. One shall sit comfortably and to permit the transcending mind to comprehend and imbibe the above features of solid domain.



LESSON-5

CREATIVE ORIGIN

1. Creative origin is the fourth fold of the hyper cube 3 as a four folds manifestation layer (1, 2, 3, 4).
2. 4-space plays the role of origin of 3-space.
3. 4-space is a spatial order space (2-space plays the role of dimension of 4-space), while 3-space is a linear order space (1-space plays the role of dimension of 3-space).
4. It is because of this dimensional order, that creative origin is of point body set up at the seat of centre of the cube.
5. It is with the split of 3-space domain into 8 octants format of 3-space, that the origin has a release from the domain.
6. It is with this release of origin that it manifests as domain fold of hyper cube 4 with solid boundary of eight components.
7. It is this feature of the creative origin, which deserves to be comprehended well.
8. A reach from 3-space domain to 3-space origin is going to be a reach from 3-space to 4-space.
9. It is because of the spatial order of four space that centre of the cube as a seat of origin, acquires a dual status.
10. One shall sit comfortably and to permit the transcending mind to distinctively glimpse and imbibe the values of origin fold of hyper cube 3.



6

SEALED ORIGIN

1. Origin of 3-space gets sealed with super imposition of origin of a three dimensional frame.
2. In this state, the centre of the cube acquires structural set up like any other point of the domain fold (volume).
3. Centre, as a point volume gets a sealed point of the domain fold.
4. The sealed point of domain folds of 3-space plays the role of origin fold of hyper cube 2 (0, 1, 2, 3).
5. One may have a pause here and take note that sealed origin of hyper cube 2, as such will amount to a double seal for the point of 3-space domain.
6. A reach at the sealed origin of hyper cube 1 will add another sealed, the third seal, upon the point of three space domain.
7. This feature, as such by definition, be taken as a feature of compactified origins at the same seat / centre of the domain fold of the format of hyper cube.
8. One shall sit comfortably and permit the transcending mind to fully comprehend this feature and phenomenon of compactified origin with-in the domain fold, at it centre.
9. It would further be blissful to take note that with sequential on sealing their emerge surfacing of a sequential range of hyper cubes from with-in the origin folds.
10. One shall sit comfortably and to permit the transcending mind to glimpse and imbibe these feature fo the phenomenon of compactified organization of origin folds.



TRANSCENDENTAL BASE

1. The unsealing process of the compactified state of origins, sequentially takes from origin from 4th fold to the 5th fold as domain of the next origin which gets unsealed in the process, from the given origin.
2. This feature is designated as the feature of transcendence phenomenon.
3. The transcendence phenomenon extended four folds manifestation layer of hyper cube into 5 folds range.
4. The fifth fold is designated as base fold.
5. First four folds namely dimension fold, boundary fold, domain fold and origin fold, together with the fifth fold namely base fold makes a transcendence range of five folds.
6. It is this extension of four folds manifestation layer into five folds transcendence range, which deserves to be thoroughly chase, for its complete appreciation to have its complete imbibing to acquire proper insight and to attain appropriate enlightenment about this systems of Vedic Mathematics Science and Technology.
7. The four folds manifestation layer (1, 2, 3, 4) shall be extended into a five folds transcendence range (1, 2, 3, 4, 5).
8. Likewise the four folds manifestation layer (2, 3, 4, 5) shall be extended into a transcendence range (2, 3, 4, 5, 6).

9. In general, four folds manifestation layer ($N, N+1, N+2, N+3$) shall be extending into five folds transcendence range ($N, N+1, N+2, N+3, N+4$).
10. It would be blissful to take note that transcendence from four fold manifestation layer (1, 2, 3, 4) into transcendence range (1, 2, 3, 4, 5), infact shall be a reach from the four fold manifestation layer (1, 2, 3, 4) to a synthesized set up of pair of four folds manifestation layer (1, 2, 3, 4) and (2, 3, 4, 5) along the transcendence range format (1, 2, 3, 4, 5).
11. It would be a blissful exercise to sequentially chase this transcendence phenomenon starting with manifestation layer (1, 2, 3, 4) with reach at (1, 2, 3, 4, 5), and from (2, 3, 4, 5) with a reach at (2, 3, 4, 5, 6) and so on.
12. It is this feature of unsealed origin, which deserves to be comprehend well and its feature and values for properly appreciated for their complete imbibing.
13. It would also be relevant to take note that the compactified nature of origins is responsible for sequential unfolding of this compactifiction, because of which is the emergence of sequential transcendence ranges namely (1, 2, 3, 4, 5), (2, 3, 4, 5, 6), (3, 4, 5, 6, 7) and so on.



SIX PLACE VALUE SYSTEM

1. Spatial boundary set up leads to a six place value system.
2. Each of the 6 surface plate of solid domain is of a solid origin enveloped with in a spatial boundary of six components.
3. As such, the transcendence at the origin folds of six surface plates shall be leading to $(6 \times 6) = 36$ spatial components formats
4. One may have a pause here and take note that each of these 36 spatial components shall be having solid domain as origin folds enveloped with 6 surface plates each and thereby this stage of transcendence there would emerge, as many as 6^3 spatial structural components.
5. And the process will continue, sequentially lead to $6^1, 6^2, \dots$ spatial structural components.
6. It would be blissful to take note that this sequential emergence of values as $6^1, 6^2, \dots$ is parallel to six place value format.
7. It is this feature of the spatial boundary of solid domain, which deserves to be comprehend well for its proper appreciation and for complete imbibing of its values to acquire proper insight and to attain appropriate enlightenment of six place value system
8. One may have a pause here and take note that, it is this feature which will further bring us face to face with parallel mathematics of artifices of number and of dimensional spaces.
9. A step ahead, the solid boundary of 8 component of hyper cube 4 shall be bringing us face to face with the parallel feature of eight place value system and of solid

- boundary of hyper cube 4, the representative regular body of 4-space.
10. A step ahead, creative boundary of ten component of hyper cube 5, the representative regular body of 5-space, shall be bringing us face to face with the parallel feature of ten place value system and of creative boundary of ten components hyper cube 5
 11. The interrelationship of the setups of hyper cube 3 and hyper cube 5 will further help us to reach at interrelationship of six place value system with ten place system.
 12. Infact, every place value system is fully interrelated with every other place value system, like every hyper cube is interrelated with every other hyper cube.
 13. It is this interrelationship, which deserves to be comprehend well for complete appreciation and full imbibing



5X7 GRID

1. Vedic system work out double digit number of n place value system along $(N-1) \times (N+1)$ grid of (N^2-1) grid zones.
2. The basic ten place value system with its $99 = (9 \times 11)$ double digit number is availed for the organization of the knowledge of the last (thirteen chapter) of Sri Mad Durga Sapt-Shati.
3. The six place value system leads to the format of 5x7 grid for coverage of 35 double digit number of 6 place value system along 35 grid zone, as under

01	02	03	04	05	
10	11	12	13	14	
15	20	21	22	23	
24	25	30	31	32	
33	34	35	40	41	
42	43	44	45	50	
51	52	53	54	55	100

4. It would be a blissful exercise to find equivalent values of above 35 double digits number of 6 place value systems into ten place value systems as (01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35).
5. It would be blissful to take note that the triple digit number value (100) of six place value system is having its equivalent value in ten place value system as (36).

6. It would be a blissful exercise to reach at equivalent values of ten place value system (00 to 99) into six place value system.
7. It would be blissful to take note that common algebraic format for place value system is $(A+BX^1+CX^2+\dots)$.

THREE PLACE VALUE SYSTEM

1. Double digit number of 3 place value systems are '8' which are accommodated by eight grid zones of 2x4 grid as under:-

01	02		
10	11		
12	20		
21	22	100	

2. Double digit numbers of 5 place value systems are '24' which are accommodated by twenty four grid zones of 4x6 grid as under:-

01	02	03	04	
10	11	12	13	
14	20	21	22	
23	24	30	31	
32	33	34	40	
41	42	43	44	100

3. In general grid $(N-1) \times (N+1) = N^2-1$ accommodates all the double digit numbers for all odd and even place values system (N) .



10

OUTER AND INWARD FOUR SPACES

OUTWARD FOUR SPACE

1. The space outside cube is a 4-space.
2. The space within cube is 3-space.
3. The corner points of the cube as origin points of three dimensional frame embedded in the corner points are of dual status of points of three space, as well as, the points of four space.
4. One may have a pause here and take note that this feature is there because of the compactified stage of origin.
5. Cube, as a three space body, within four space, plays the role of solid dimensional order of transcendental origin (5-space as origin) of 4-space.

INNER FOUR SPACE

1. The creative origin of 3-space leads to inner four space.
2. The spatial boundary of 3-space as spatial order creates the outer four space.
3. The transcendence from 3-space to 4-space leads to inward expansion.
4. The transcendence outward from spatial boundary leads to outer expansion from 3-space to 4-space

5. It is this permissibility of simultaneous inward and outward expansion from 3-space to 4-space is the feature which deserves to be comprehended well.



3-SPACE VEDIC MATHEMATICS, SCIENCE & TECHNOLOGY

SECTION-3

LESSON -1

INTERVAL, SQUARE AND CUBE FORMATS

INTERVAL:-

1. Interval is hyper cube 1.
2. It is four folds manifestation layer (-1, 0, 1, 2).
3. Domain boundary ratio is $A^1:2A^0$.
4. Interval (hyper cube 1) as 3 versions.
5. 3 version of interval permit organization as (-1, 0, 1) signature range.

SQUARE:-

6. Square is hyper cube 2.
7. It is four folds manifestation layer (0, 1, 2, 3).
8. Domain boundary ratio is $A^2:4A^1$.
9. Square (hyper cube 2) as 5 versions.
10. 5 versions of square permit organization as (-2, -1, 0, 1, 2) signature range.

CUBE:-

11. Cube is hyper cube 3.
12. It is four folds manifestation layer (1, 2, 3, 4).
13. Domain boundary ratio is $A^3:6A^2$.
14. Cube (hyper cube 3) as 7 versions.

15. 7 versions of cube permit organization as (-3,-2,-1, 0, 1, 2, 3) signature range.

SEQUENTIAL CHASE ALONG FORMAT OF MIDDLE SIGNATURE VERSION:-

INTERVAL:-

1. Value N for middle signature version will make three signature range as of values (N-1, N, N+1) of total value 3N.
2. As such, the sequential values of N = (2², 2², 2³, 2⁴ ...) shall be leading to value as (2¹x3, 2²x3, 2³x3, 2⁴x3 ...).
3. One may have a pause here and take note that the middle signature version, maintains the sequential value for the summation value of whole range as above,
4. A step ahead, N = (3¹, 3², 3³, 3⁴ ...) shall be leading to summation value sequence for the range as (3¹x3, 3²x3, 3³x3, 3⁴x3 ...)
5. Likewise, would follow the sequential values for N = (4¹, 4², 4³, 4⁴ ...), and in general would follow for the values sequence for N = (N¹, N², N³, N⁴ ...).

SQUARE:-

1. Value N for middle signature version will make five signature range as of values (N-2, N-1, N, N+1, N+2) of total value 5N.
2. As such, the sequential values of N = (2², 2², 2³, 2⁴ ...) shall be leading to value as (2¹x5, 2²x5, 2³x5, 2⁴x5 ...).
3. One may have a pause here and take note that the middle signature version, maintains the sequential value for the summation value of whole range as above,

4. A step ahead, $N = (3^1, 3^2, 3^3, 3^4 \dots)$ shall be leading to summation value sequence for the range as $(3^1 \times 5, 3^2 \times 5, 3^3 \times 5, 3^4 \times 5 \dots)$.
5. Likewise, would follow the sequential values for $N = (4^1, 4^2, 4^3, 4^4 \dots)$, and in general would follow for the values sequence for $N = (N^1, N^2, N^3, N^4 \dots)$.

CUBE:-

1. Value N for middle signature version will make seven signature range as of values $(N-3, N-2, N-1, N, N+1, N+2, N-3)$ of total value $7N$.
2. As such, the sequential values of $N = (2^2, 2^2, 2^3, 2^4 \dots)$ shall be leading to value as $(2^1 \times 7, 2^2 \times 7, 2^3 \times 7, 2^4 \times 7 \dots)$.
3. One may have a pause here and take note that the middle signature version, maintains the sequential value for the summation value of whole range as above.
4. A step ahead, $N = (3^1, 3^2, 3^3, 3^4 \dots)$ shall be leading to summation value sequence for the range as $(3^1 \times 7, 3^2 \times 7, 3^3 \times 7, 3^4 \times 7 \dots)$.
5. Likewise, would follow the sequential values for $N = (4^1, 4^2, 4^3, 4^4 \dots)$, and in general would follow for the values sequence for $N = (N^1, N^2, N^3, N^4 \dots)$.

HYPER CUBE 4, HYPER CUBE 5 AND HYPER CUBE

6:-

1. Hyper cube 4, 5 and 6 are 9, 11 and 13 versions respectively.
2. As such, these version would be signature ranges:
 $(N-4, N-3, N-2, N-1, N, N+1, N+2, N+3, N+4)$
 $(N-5, N-4, N-3, N-2, N-1, N, N+1, N+2, N+3, N+4, N+5)$

(N-6, N-5, N-4, N-3, N-2, N-1, N, N+1, N+2, N+3,
N+4, N+5, N+6)

3. It would be blissful exercise to chase along above format for $N = (2^1, 2^2, 2^3 \dots), (3^1, 3^2, 3^3, 3^4 \dots), (4^1, 4^2, 4^3, 4^4 \dots), (M^1, M^2, M^3, M^4 \dots)$.



LESSON 1A

Single, double and triple digits numbers

1. Single digit numbers of n place value system are 'n', including '0', with 0 being a digit like any other digit.
2. Double digit numbers of n place value system are n^2+n , taking 0 as like other digits.
3. Triple digit numbers of n place value system are n^3+n^2+n , taking 0 as well and digit like any other digits.
4. If '0', '00' and '000' are excluded, then
 - (i) Single digit numbers would be $(n-1)$ in number
 - (ii) These $(n-1)$ single digit numbers will become $(n-1)$ double digit numbers, with first digit being '0'
 - (iii) Double digit numbers will become $(n-1) \times (n+1) + (n-1)$.
 - (iv) The above $(n-1) \times (n+1) + (n-1)$ will become triple digit numbers with their first digit being '0'.
 - (v) With it the, the total triple digits will become $n^3 + n-1 \times (n+1) + (n-1) = n^3 + n^2 + n - 2$.
5. For $n=10$, the single, double and triple digit numbers will come to be
 - (i) Single digit numbers = 9
 - (ii) Double digit numbers = 99
 - (iii) Triple digit numbers = 999
- 6.

LESSON 2

CUBES SEQUENCE ($1^3, 2^3, 3^3, 4^3 \dots$)

1. It would be a blissful exercise to chase values sequence ($1^3, 2^3, 3^3, 4^3 \dots$).
2. Firstly it can be chase the artifice of numbers.
3. Secondly it can be chased as artifice cubes.
4. Thirdly it can be chased as 3-space bodies (hyper cubes-3)
5. Fourthly it can be chased as the middle values of signature ranges of hyper cubes (1, 2, 3, 4, 5, 6 ...).
6. Further it can be chased as the synthetic set up of (1, 8, 27, 64, 512 ...) number of cubes, synthesized as (1, 8, 27, 64, 512 ...) sub cubes.
7. This chase can be in terms of the structural set up of the synthetic set up of numbers of sub cubes in each case.



LESSON 7

Perfect numbers (6, 28, 496, 8128).

1. Perfect number 6
Number value 6 accepts re-organization as
- 2.

LESSON 10

Difference values sequence of linear and spatial dimensional synthesis values

1. Synthesis values of single, double, triple, quadruple and higher number of linear dimensions comes to be (1, 3, 6, 10, 15, ---).
2. Synthesis values of single, double, triple, quadruple and higher number of spatial dimensions comes to be (2, 4, 6, 8, 10, 12, ---).
3. Values differences sequence of above pair of synthesis sequences comes to be (-1, -1, 0, 2, 5, 9, 14, --).
4. One may have a pause here and take note that the above values differences sequence (-1, -1, 0, 2, 5, 9, 14, --) is a sequence of difference values of its consecutive values entities being (0, 1, 2, 3, 4, 5, 6, 6).
5. This feature deserves to be comprehend well for its through appreciation and complete imbibing, as it is parallel to the set of non negative whole number.
6. For the present, it be taken that this value sequence is responsible for the values difference between any pair of sequences of consecutive order dimension synthesis remaining constant as is the feature in respect of dimensions of linear order and dimensions of spatial orders reached at above.

LESSON 11

Transcendence ranges synthesis values sequence (... , -35, -24, -13, -2, 9, 20, 31, 42, 53 ...).

1. Transcendence range is a five fold range.
2. A pair of transcendence ranges of same order synthesized by accepting synthesis glue equal to the value of the order of these transcendence ranges.
3. Illustratively the pair of transcendence ranges (1, 2, 3, 4, 5) and (1, 2, 3, 4, 5) of summation value 15 each, accept transcendence synthesis glue value (1) and grand synthesis value of this pair of transcendence ranges comes to be $15 + 1 + 15 = 31$
4. In general, the transcendence ranges pair $(n, n + 1, n + 2, n + 3, n + 4)$ accept synthesis value $= 11n + 20$.
5. $N = ---, -6, -5, -4, -3, -2, -1, 0, 1, 2, 3, 4, 5, 6, ---$ leads to synthesis values sequence $(---, -68, -57, -46, -35, -24, 13, -2, 9, 20, 31, 42, 53, 64, ---)$
6. This value sequence $(---, -68, -57, -46, -35, -24, 13, -2, 9, 20, 31, 42, 53, 64, ---)$ is designated as a sequence of synthesis value of pair of transcendence ranges of the same order, in short, a sequence of synthesis values of a pair of transcendence ranges.
7. One may have a pause here and take note that synthesis value 31 is of linear order 3-Space, which manifests as hyper cube 3 / cube.
8. One may have a pause here and take note that cube is a set up of 31 structural components, namely (8 corner points, 12 edges, 6 surfaces, 1 domain, 3 axes and 1 origin).

9. One shall glimpse these features for proper appreciation and complete imbibing thereof.
10. The structural set up of cube, parallel to the synthesis of the pair of linear order, transcendence ranges, deserves to be properly comprehended for its through appreciation and for complete imbibing thereof.
11. A step ahead, the synthesis value 42 accepts re-organization as $42 = 21 + 21 = (1 + 2 + 3 + 4 + 5 + 6) + (1 + 2 + 3 + 4 + 5 + 6)$
12. One may have a pause here and take note that the six steps long $(1 + 2 + 3 + 4 + 5 + 6)$ amounts to transcendence from five steps long range $(1 + 2 + 3 + 4 + 5 + 6)$ for reach at $(1 + 2 + 3 + 4 + 5 + 6)$.
13. This is a feature of spatial order 4-Space (2-Space in the role of dimension of 6-Space).
14. It would be relevant to take note that 6-Space has 4-space as dimension and 4-Space has 2-space as dimension.
15. These features deserve to be comprehended well for the proper appreciation and complete imbibing thereof.

LESSON 12

3-space domain split during transcendence through domain

1. 3-Space domain is a linear order domain (1-Space plays the role of dimension of 3-space).
2. Pair of linear dimensions have synthesis value $(1, 1) = 3$.
3. As such, split of 3-space domain leads to a pair of 1-space domains (parallel to a pair of linear dimensions) and 'dimension of dimension' of 1-space.
4. It is this feature as that during split of 3-Space domain, there also emerges a release of dimension of dimension, which deserves to be comprehended well.
5. One may have a pause here and take note that during first stage split of 3-Space domain, there emerges a spectrum of the pair of 1-space domains.
6. And also there emerges (-1) space domain as well.
7. At next stage of split, the pair of 1-space domains shall be leading to the spectrum of a pair of (1-space domains) in each case.
8. That way there would become available, as many as a spectrum of five entities of (-1-Space domains).
9. Simultaneously, also would be a release of pair of streams of dimensions of dimensions of 1-Space domains.
10. One may have a pause here and to properly comprehend and to imbibe the features of 3-space domains split spectrum at its first stage being of a pair of entities of 1-Space domain and at the second stage, there being a spectrum of as many as 5 entities of (-1) space domains.

11. One may further have a pause here and take note that the basic domain split feature is that domain splits into a pair of domains of dimensional order and also there happens to be a release of one stream of values of dimension of dimension of the domain itself.
12. This feature at first split stage leads to a spectrum of two entities and a release of one stream of dimension of dimension order
13. And at second step stage, there emerges a spectrum of five entities of previous stage domains and along with them, there also emerges a pair of streams of value of dimension of dimension of such previous stage domains.
14. Accordingly, at third stage there emerges spectrum of 12 domains of dimension of dimension order of previous stage domains and in addition thereto there also emerge five streams of order of dimension of dimension of those domains.
15. It would be blissful to take note that the sequential split spectrum comes to be of entities (1, 2, 5, 12, 29, 70, ---) and parallel to it also emerges a sequence of flow streams of values of dimension of dimension (0, 1, 2, 5, 12, 29, -).
16. One may have a pause here and take note that initial startwith stage of split spectrum it is taken to be of one domain entity and zero streams.
17. The first split is of two entities and one flow stream.
18. And at second stage the spectrum is of five entities and also there is a pair of flow streams.
19. One shall comprehend and imbibe the values of domain split spectrum, in reference to any domain (n), which shall be sequentially leading to n domain to (n-2) domain to (n-4) domain and so on.
20. This split phenomenon of domain is designated as transcendence within the domain.

21. Transcendence within the domain takes from dimension to domain and then from dimension to dimension, and so on.
22. In case of n being odd, there happens a reversal of orientation during transcendence from 1-Space to -9-Space,
23. However in case of n being even the reversal takes place from 0-space to -2-Space.
24. One may have a pause here and take note that with reversal of orientation, the transcendence avails a parabolic format.
25. It is this format of transcendence within domain, which deserve to be comprehended well for its thorough apprehension and for its complete imbibing to acquire proper insight and to attain appropriate enlightenment.

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File 1 Aspect 1 Three Space VMS&T-
Introductory

THREE SPACE VMS&T

ASPECT 1-INTRODUCTORY

1. Vedic systems work out Mathematics, Sciences & Technologies of each dimensional space distinctively being specific to format, features, values and virtues of the dimensional order of the concerned dimensional space.
2. Of these , quadruple spaces namely (3 space, 4 space, 5 space, 6 space) have been specifically worked out and availed as real spaces .
3. Mathematics, Sciences and Technologies of these quadruples spaces have been distinctively worked out and availed by the Vedic systems.
4. Mathematics, Sciences and Technologies of 3 space are of distinct format, features, values and virtues being the same of linear dimensional order.
5. On the other hand, 4 space is of a spatial dimensional order, 5 space is of a solid dimensional order and 6 space is of hyper solid dimensional order and that being so Mathematics, Sciences and Technologies of 4 space , 5 space and 6 space are naturally of distinct formats, features,

values and virtues being of spatial , solid and hyper solid dimensional order.

6. Here , the focus is upon Mathematics, Sciences and Technologies of 3 space .
7. As the Mathematics, Sciences and Technologies of 3 space are common dimensional order, namely linear dimensional order, as such the common values base of Mathematics, Sciences and Technologies , as such makes out 3 space Mathematics, Science and Technology.
8. One may have a pause here and permit the transcending mind to distinguishively comprehend and to appreciate as that the discipline of Vedic Mathematics, Science and Technologies of 3 space is distinct than the disciplines of Mathematics, Sciences and Technologies of 3 space.
9. Simultaneously it also would be relevant to take note that as the values base of the discipline of 3 space VMS&T is commonly available for the disciplines of Mathematics, Sciences and Technologies of 3 space as well, as such 3 space VMS&T , that way becomes the core of 3 space Mathematics, as well as of 3 space Sciences, and of 3 space Technologies.
10. However, 3 space Mathematics is of distinct range and domain than that of 3 space VMS&T.
11. Likewise the range and domain of 3 space Sciences are distinct volumes than that of 3 space VMS&T.
12. Further, the ranges and domains of 3 space Technologies as well would be of different volumes than that of 3 space VMS&T.
13. One may have a pause here and be conscious that we are going to focus here on 3 space VMS&T .
14. This focus may give an insight about 3 space Mathematics, 3 space Sciences and 3 space Technologies but nevertheless, the ranges and domain of said disciplines will not remain fully covered during present chase and this chase will only remain confined to core values of all these disciplines.

15. 3 space VMS&T is intimately linked with the linear dimensional order of 3 space.
16. 3 space VMS&T chases 3 space content manifesting as domain fold (Volume Part) of solids (3 space bodies) .
17. With it 3 space content, 3 space bodies, number value 3, emerge as the basic tools for the chase of 3 space VMS&T.
18. These tools helps settle a three dimensional frame of 3 linear dimensions (Axes) .
19. This takes us to cube and sphere being a pair of representative regular bodies of 3 space which do not distinguish one dimensional axis role over that of the other.
20. This further takes us to common domain boundary ratio formulation as a^3 : is to $6b^2$.
21. With it domain (Volume Part) gets framed with in a three dimensional frame providing spatial boundary envelop for the domain fold of solids (3 space bodies).
22. The role of geometric envelop in reference to dimensional frame of 3 space , that way deserves to be comprehended and appreciated to imbibe the features and values of manifestation of 3 space content as domain fold of solids (3 space bodies).
23. This further brings to focus the organization feature of the domain fold parallel to the split of cube in to 8 sub cubes which further being parallel to the split of 3 space in to 8 octants.
24. With it comes to focus the distinguishing status of the centre of the cube as seat of origin of 3 dimensional frame where the inner most corner point of all the 8 sub cubes meet.
25. One may sit comfortably and permit the transcending mind to comprehend the collapse of zero volume cube as set of zero volume 8 sub cubes collapsing at centre of the cube.
26. It shall be a blissful exercise to visit and revisit the above features of organization of the domain fold (Volume Part) of solids (3 space bodies).

27. 3 space VMS&T chases the organization of 3 space content lumps manifesting as domain fold and playing different roles like 3 space as domain fold , 3 space as boundary fold, 3 space as origin fold , 3 space as dimension fold and 3 space as base fold.

ASPECT 2 - STRUCTURAL SET UP OF CUBES

1. Let us revisit the “ Cube”.
2. Its set up brings to focus 8 corner points, 12 edges, 6 surfaces and volume of the cube.
3. With in each of the corner points is embedded a three dimensional frame of half dimensions.
4. This makes corner of the cube as the seat of origin of the dimensional frame.
5. The axis emanating from this origin avail the formats of the 3 edges meeting at the said corner point.
6. We may take it as that the axis of this dimensional frame are oriented inwards
7. One may have a pause here and take note that each edge of the cube, as such becomes the format for the pair of axis emanating from the pair of corner points as end point of the said edge of the cube.
8. One may further have a pause here and take note that each edge as of the format of an interval as a pair of opposite orientations parallel to the orientations of the axis emanating from the pair of corner points as end points of the edge.
9. One may further have a pause here and take note that 8 corner points of the cube permit coordination as quadruple internal diagonals of the cube passing through the centre of the cube.
10. Further with , centre of the cube as origin of a three dimensional frame and triple axis of this dimensional frame coordinating six surface plates of the cube as triple pair of surface plates and each such pair of surface plates getting coordinated by a dimensional axis passing through the centres of the pair of surface plates.

11. One may have a pause here and permit the transcending mind to comprehend and imbibe these structural features of the set up of the cubes.
12. One may further have a pause here and take note that the pair of three dimensional frames of half dimensions embedded in the pair of corner points coordinated by the internal diagonal, as such become the translation format for the pair of three dimensional frame of half dimensions which with their reach for their origins at the centre of the cube shall be synthesizing a three dimensional frame of full dimension.
13. One may have a pause here and take note that this way , in addition to the original three dimensional frame of full dimension at the centre of the cube , there would emerge quadruple more synthesized three dimensional frame of full dimension , which that way makes availability of a set up of five three dimensional frames of full dimensions.
14. One shall sit comfortably and permit the transcending mind to visit and revisit the above phenomenon and emerging structural features of the set up of the cube.
15. One may have a pause here and take note that the imposition of a three dimensional frame with its origin super imposed upon centre of the cube will split the cube in to 8 sub cubes.
16. Further as that the translation of three dimensional frames of half dimension embedded in 8 corner points of the cube shall be synthesizing quadruple three dimensional frames of full dimensions which together with the original three dimensional frame of full dimensions shall be making a set up of five three dimensional frames of full dimensions, which together shall be constituting a solid dimensional frames of five dimensions.
17. It would be a blissful exercise to glimpse the above phenomenon which firstly brings us face to face with centre of the cube being the seat of 4 space as origin of 3 space,

and then , a step ahead, it becomes the seat of 5 space as origin of 4 space.

18. One may have a pause here and take note that 5 space is a solid order space and it accepts a solid dimensional frame of 5 solid dimensions.
19. One shall sit comfortably and permit the transcending mind to sequentially chase this format of sequential reach from centre of 3 space to its status as 4 space origin and a step ahead as of the status of the seat of 5 space as origin of 4 space.
20. One may have a pause here and take note that this brings us face to face with the structural feature of the set up of cube as that its centre is the seat of compactified range of origins.
21. It is this phenomenon of centre of cube sequentially acquiring the status of sequentially compactified higher dimensional spaces origins.
22. It is this feature of inward extension by way of transcendence at origin of the dimensional space (here 3 space) which deserves to be comprehended well and to be appreciated fully for its complete comprehension to acquire deep insight and enlightenment about the structural set up of the cube as representative regular body of 4 space
23. One may further have a pause here and take note that this insight and enlightenment about the structural set up of the cube shall be bringing us face to face with the continuity phenomenon of sequential manifestation along the common format which makes whole range of manifestation as a sequential range of hyper cubes and cube being hyper cube 3
24. It would be a blissful exercise to have transition from the set up of square as hyper cube 2 to cube as set up of hyper cube 3 .
25. A step ahead, it would further be a very blissful exercise to chase transition from the set up of hyper cube 3 to the set up of hyper cube 4.

26. One may have a pause here and take note that hyper cube is a four fold set up designated as four fold manifestation layer.
27. The four folds of four folds manifestation layer are sequentially designated as dimension fold, boundary fold, domain fold and origin fold.
28. Cube as hyper cube 4 is a four fold manifestation layer with one space playing the role of dimension, 2 space playing the role of boundary, 3 space playing the role of domain and 4 space playing the role of origin.
29. One may have a pause here and take note that the different roles played by a space are in fact the different roles played by its space content lumps manifesting as domain fold of the concerned hyper cubes.
30. This as such shall be bringing us face to face with the structural set up of the cube contributing to the set ups of different formats and features of the set up of the different roles played by 3 space content lump as domain fold of cube being hyper cube 3 .
31. One may have a pause here and permit the transcending mind to visit and revisit the structural set up of the cube .

ASPECT 3 - CUBE IS HYPER CUBE 3

1. Let us revisit interval, square and cube together.
2. Interval has a pair of end points, square has two pairs of boundary lines and cube has 3 pairs of surfaces.
3. One may have a pause here and take note that this feature, a pair of end point, two pairs of boundary lines and 3 pairs of surfaces , as such lead to a common formulation $2nB^{n-1}$, $N=1,2,3$.
4. One may have a pause here and take note that this further leads us to the formulation $A^n: 2nB^{n-1}$, $N=1,2,3$.

5. This feature, as such helps us comprehend and appreciate common format for the organizational set up of interval, square and cube.
6. Interval and its end point, as domain and boundary, likewise take us to square and its boundary line as its domain and boundary, which further takes us to cube and its surface plates as its domain and boundary.
7. This makes the formulation $A^n: 2 nB^{n-1}$, $N=1,2,3$ as the domain boundary formulation.
8. We are acquainted with three dimensional frames, a set up of 3 linear axis.
9. This makes linear axis as the dimension fold for the set up of the cube as dimensional body of 3 space.
10. One may have a pause here and take note that one space (line) plays the role of dimension/axis of 3 space.
11. This makes the domain fold, dimension fold as of the format (N,N-2), $N=3$.
12. One may have a pause here and take note that the formulation (N,N-2) as of the format (domain, dimension), as a general formulation for $N=1$ shall be taking us to (1,-1) implying that -1 space plays the role of dimension of +1 space.
13. Further $N=2$ shall be leading us to (N, N-2) as domain, dimension format for $N=2$ as (2,0) implying that zero space plays the role of dimension of 2 space.
14. One may have a pause here and take note that the above feature brings us face to face with -1 space as dimension, 0 space as boundary and 1 space as domain in reference to interval.
15. Likewise 0 space as dimension, 1 space as boundary and 2 space as domain are the features of square.
16. A step ahead 1 space as dimension, 2 space as boundary and 3 space as domain are the features of a cube.
17. Let us have a pause here and take note that cube permits split into 8 sub cubes with inner most corner of all the 8 sub cubes having seat at centre of the cube.

18. Further as that the formulation $A^n: 2 nB^{n-1}$, $N=1,2,3, 4$ shall be taking us to 4 space with its boundary constituted by 8 cubes.
19. One may have a pause here and take note that the structure at the centre of the cube as such of the format and features of 4 space body which has solid boundary of 8 components.
20. Still further as that centre is the seat of origin of a three dimensional frame.
21. It is the seat of origin of 3 space.
22. It makes it as that 4 space plays the role of origin of 3 space.
23. This, as such makes 4 space in the role of origin fold for the set up of cube.
24. One may have a pause here and take note that cube is the set up which accepts one space as dimension fold, 2 space as boundary fold, 3 space as domain fold and 4 space as origin fold.
25. These features make cube as hyper cube 3 , a four fold manifestation layer with one space as dimension, two space as boundary, three space as domain and four space as origin.
26. This is of the format ($N, N+1, N+2, N+3$) format of hyper cube ($N+2$).
27. As such cube is hyper cube 3 .
28. Square is hyper cube 2 , and interval is hyper cube 1.
29. One shall sit comfortably and permit the transcending mind to revisit interval as a track of a moving point.
30. Square as a track of a moving line.
31. Cube as a track of a moving square.
32. Let us have a pause here and take note that point as a zero space body accepts structures of zero space content .
33. Now if point is structured with 1 space content, or 2 space content or 3 space content then naturally the formats of interval, square and cube shall be of different structural set up.

34. One may have a pause here and permit the transcending mind to visit and revisit the set up of a cube with in a cube.
35. As with in a cube would mean , to be with in the domain fold , which would imply as to be with in a space fulfilled with 3 space content lump as its constituents.
36. Therefore, points with in a cube would be points structured with the structure of 3 space content lump itself.
37. Therefore, interval with in 3 space domain would be a set up of a 3 space content lump point.
38. Likewise square with in 3 space domain would be a set up of 3 space content lump points initially structuring a line and then such lines structuring a square.
39. A step further, cube with in a cube would be a set up of a cube of 3 space content lumps.
40. One may have a pause here and permit the transcending mind to visit and revisit this set up of cube with in a cube.
41. The outer cube has a sequential reach from zero space point to 1 space point to 2 space point to 3 space point.
42. However, cube with in a cube having a reach with its starting point as points structured with structures of 3 space content itself.
43. Therefore, the intervals, square and cubes reach there from such start with structured point, shall be leading us to a structural format of different features which deserves to be comprehended well and to be thoroughly appreciated for its complete imbibing to have deep insight and proper enlightenment about it.
44. One may have a pause here and take note that it in a way shall be bringing us face to face with the different roles of 3 space content lump, a 3 space content lump in a static state is of the format and features of a static domain.
45. However, structured point in motion makes it a dynamic state point. As such the point structured with 3 space content , in a dynamic state, shall be making 3 space domain in the role of a dimension.

46. It is this which shall be making it in the role of a solid dimension.
47. It is this feature of 3 space in the role of dimension, which deserves to be comprehended well.
48. Let us have a pause here and pose to oneself as to what extent we are conscious of the different structural format standing created by static and dynamic state of 3 space content lump .
49. One may further have a pause here and take note that as that 4 space plays the role of origin of 3 space and because of it centre of cube acquires the status of a seat of 4 space , which is of dimensional order, therefore, the cube with in cube shall be in its dynamic state would be taking us to the role of solid boundary of hyper cube 4 .
50. It is this structural format differences for the outer cube and inner cube, which deserves to be comprehended well and to be thoroughly appreciate for its complete imbibing to have deep insight and enlightenment about it .
51. It is this conceptual comprehension , in terms of which we shall be appreciating the role of structural set up of a cube during different roles of 3 space content lumps.
52. And this comprehension deserves to be perfected.

ASPECT 4 - TRANSITION FROM SQUARE TO CUBE

1. Let us revisit the structural set up of square and cube.
2. Let us chase the structural set up of a square with in a 2 dimensional frame with origin super imposed upon centre of the square.

3. The dimensional axes of 2 dimensional frames pass through the middle points of the sides of the square.
4. Let us have a pause here and take note that, this, this way, makes an arrangement of 8 point set up along the boundary of square.
5. Let us have a further pause here and take note that there are 8 corner points of the cube.
6. Further as that square admits a pair of internal diagonals .
7. The pair of dimensional axis and pair of internal diagonals of the square cut the surface of the square in to 8 sub surfaces.
8. One may have a pause here and take note that a three dimensional frame splits the cube in to 8 sub cubes, parallel to split of 3 space into 8 octants.
9. Let us revisit the structural set up of the square with in two dimensional frames with origin super imposed upon the centre of the square.
10. This brings to focus the emergence of 8 components of boundary lines and 4 components of dimensional axes which together make out a set of 12 linear components.
11. One may have a pause here and take note that the set up of a cube accepts 12 edges.
12. Let us revisit the set up of the cube .
13. The volume of a cube as space enveloped with in spatial boundary of geometric envelop, with removal of the space, will permit collapse for the geometric envelop along the format of a surface of a pair of faces.
14. One may further have a pause here and take note that a surface with in 3 space acquires a pair of faces
15. Further as that a peeling off a pair of faces of the surface shall be releasing a space of the format and features of 3 space permitting enveloping to be of the format of a volume (of the cube)
16. All these feature of the set up of square and cube deserve to be comprehended well for their thorough appreciation

and full imbibing to acquire deep insight and enlightenment about these set ups.

17. One may have a pause here and take note that square is hyper cube 2 and as such is a four fold manifestation layer parallel to quadruple artifices of numbers (0,1,2,3).
18. On the other hand, cube is hyper cube 3 and as such is a four fold manifestation layer of values parallel to quadruple artifices of number (1,2,3,4).
19. A transition from four fold manifestation layer of hyper cube 2 to four fold manifestation layer of hyper cube 3, in fact is a transition of four fold steps from the quadruple values (0,1,2,3) to quadruple values (1,2,3,4).
20. One may have a pause here and take note that zero space plays the role of dimension of 2 space.
21. On the other hand, one space plays the role of dimension of 3 space.
22. One may further have a pause here and take note that in case of zero space in the role of dimension it is a dynamic point of zero space content lump while in the case of 3 space it is a dynamic point structured with 1 space content lump.
23. One may further have a pause here and take note that essentially the structural set up is the creation of a dynamic point for its reach firstly to the format of an interval then to the format of square and thereafter to the format of a cube.
24. Now when point is structured with structure of zero point, all when it is structured with the structures of one space content lump, the consequential structural changes emerge in the form of the set up of hyper cube 2 and hyper cube 3 respectively .
25. One may have a pause here and take note that the Devnagric formulation for the set ups of square and cube are “Verga”, and “Ghan”.
26. One may have a pause here and take note that Vedic system work out dimensional bodies set ups with in

Creator's space (4 space), which is of a spatial order (2 space in the role of dimension) .

27. Further as that Ganita Sutras , the fundamental VMS&T values, accepts only Verga as the basic tool format for chase of structural set up of dimensional bodies.
28. Further as that Vedic systems accept transcendental code values for the Devnagri alphabet letters, as per which transcendental code value for formulation Verga comes to be 14 which is parallel to the summation value $2+3+4+5$ for the four fold manifestation layer (2,3,4,5) of spatial order hyper cube 4.
29. Still further the transcendental code value of formulation Ghan as well is 14.
30. One shall sit comfortably and permit the transcending mind to glimpse all these features and to fully imbibe them for their complete appreciation to acquire full in sight and thorough enlightenment of the same.
31. In the light of the above features, it would be a very blissful exercise to visit and revisit the set ups of square and cube and to reach at transition from the set up of structural set up of square to the set up of the structural set up of the cube.
32. It would further be a very blissful exercise to chase transition from the structural set up of cube as hyper cube 3 to the structural set up of hyper cube 4 itself.
33. One may have a pause here and take note that 3 space is a linear dimensional order space, while 4 space is a spatial dimensional order space.
34. Further as that number value 4 is a unique format , as much as that $4 = 2+2= 2 \times 2 = (-2) \times (-2)$ which amounts to not only the super imposition of addition and multiplication operation but also of a pair of opposite orientation.
35. One shall sit comfortably and permit the transcending mind to glimpse all these feature and to imbibe values thereof.
36. One may further have a pause here and revisit values triple (-1, 0,+1).

37. One may have a pause here and take note that $(-1)^{2n+1} = -1$, $0^n = 0$, $1^n = 1$.
38. As such values triple $(-1, 0, 1)$ remains the same for $(-1^{2n+1}, 0^{2n+1}, 1^{2n+1})$ for all values of N.
39. However, $(-1, 0, 1)$ becomes $(1, 0, 1)$ for $(-1^{2n}, 0^{2n}, 1^{2n})$.
40. One may have a pause here and take note that the odd and even power values difference goes indistinguishable with in Creator's space because of the spatial dimensional order of 4 space.
41. One shall sit comfortably and permit the transcending mind to glimpse all these features and to imbibe the same and to perfect comprehension of the transition from the format of square to cube as hyper cube 2 to hyper cube 3 and further from the format of hyper cube 3 to the format of hyper cube 4.
42. One may have a pause here and take note that the distinguishing features of the linear order and spatial order deserve to be comprehended well .
43. The distinguishing features will help us appreciate the distinguishing formats and values of Mathematics , Sciences and Technologies of linear order 3 space on the one hand, and of spatial order Mathematics, Sciences and Technologies of 4 space on the other hand.
44. One may further have a pause here and take note that it would further bring us face to face with the challenges of working with $\frac{1}{2}$ as the working unit for chase of 4 space Mathematics , Sciences and Technologies for its applications to the chase of linear order 3 space Mathematics , Sciences and Technologies.
45. One may further have a pause here and take note that the spatial order of 4 space simultaneously brings in to 2 as 1 and 1 as 2 while linear order of 3 space insists on 1 as 1 .
46. This insistence of 1 as 1 distinguishes plus 1 from minus 1 , while with in 4 space, +1 and -1 go on distinguishable while working with half unit.

47. One may further have a pause here and take note that (+1, -1) is parallel to the format of (+1 as domain fold, -1 as dimension fold).
48. With it a shift from +1 to -1 would amount to a shift from domain fold to dimension fold.
49. One may further have a pause here and take note that this, as such brings to focus the reflection operation as a distinct Mathematical operation of geometric format, accepted by Vedic system but the same as such is not accepted by the other systems.

ASPECT 5, 7 GEOMETRIES RANGE OF 3
SPACE

1. Cube is of 7 versions.
2. There are six surface plates constituting coverage for its domain fold (Volume Part).
3. The presence of all the six surface plates makes one of the version of a cube.
4. Like that (6,5,4,3,2,1,0) number of plates presence shall be making a range of 7 version of cube.
5. Each version of the cube is the geometric body of the respective geometry of 3 space.
6. 7 geometries range and parallel to it 7 versions of cube, as such make technologies of 3 space being of very wide spectrum.
7. One may have a pause and take note that in all these set ups, common dimensional order is of linear order format (1 space in the role of dimension).
8. 7 versions of cube, together constitute a format for organization of the existence phenomenon of 3 space content lump.

9. One may have a pause and take note that the distinction between one version in reference to another version is in the form of presence or absence of the number of surface plates/boundary component.
10. One may have a pause and take note that one way to sequentially organize these bodies of 3 space geometries would be parallel to number values range (6,5,4,3,2,1) being parallel to the presence of number of plates.
11. Parallel to it, the other sequential arrangements would be parallel to number values range (0,1,2,3,4,5,6) being parallel to the number of plates being absent at sequential steps.
12. The other organization format of the same would be of features [(6,0), (5,1), (4,2), (3,3), (2,4), (1,5), (0, 6)] which simultaneously takes care of the number of plates being present and number of plates being absent at each sequential step .
13. Needless to add that the above sequential arrangement will also bring us face to face with the parallel sequential arrangement of opposite orientation, viz:
[(0,6), (1,5), (2,4), (3,3), 4,2), (5,1), (6,0)].
14. One may have a pause here and take note that the version (3,3), in one situation would be implying as that there are 3 surface plates being present and 3 surface plates being absent.
15. However, the expression (3,3) as such does not distinguish between as that (3 surface plates being present, 3 surface plates being absent) from (3 surface plates being absent , 3 surface plates being present) .
16. As such to take care of the same, we can adopt a procedure of indicating number of plates being present as +3 and

number of plates being absent as -3. This arrangement will be of the feature $(+3, -3)$ and $(-3, +3)$.

17. One another arrangement will be to take the middle placement $(+3, -3)$ or $(-3, +3)$ as of signature 0).

18. The whole range of geometries, that way will be permitting expression as 7

geometries range of signatures $(+3, +2, +1, 0, -1, -2, -3)$.

19. Anyway these all are the procedural arrangement for the 7 geometries range of 3 space and corresponding geometric bodies.

20. One may have a pause here and take note that split of a cube into 8 sub cubes

and the corresponding split of the boundary component deserves to be comprehended well.

21. One may have a pause here and take note that the structural set up of the cube, as such, may be taken as the structural set up of 27 components namely 8 corner points + 6 surface plates + 12 edges + 1 volume.

22. Now if 2 cubes are synthesized together with one of the surface being common for the synthetic set up then while the first cube shall be contributing 27 components, the other component because of absence of one surface plate, shall be contributing only 18 components.

23. One may have a pause here and take note that total structural component of this

synthetic set up would come to be only $27 + 18 = 45$.

24. If the third cube is synthesized with this synthetic set up of pair of cubes, the contribution by this third cube would be of only 18 more components and thereby the combined structure components of a synthetic set up of 3 cubes as such would come to be $45+18=63$.

25. The addition of fourth component of the fourth cube shall be making a synthetic

set up of four cubes of the arrangement format 2×2 and the contribution by the

fourth cube would be only of 12 structural component and thereby the total

structural component for the synthetic set up of all the four cubes would be $63 +$

$$12 = 75.$$

26. The addition of fifth and sixth cube will be yielding contribution of $18 + 12 = 30$

components.

27. And addition of seventh and eighth component shall be a contribution of $12+8=20$ components.

28. This way the synthetic set up of 8 cubes would be a structural set up of $75+30+20=125 = 5 \times 5 \times 5$.

29. One may have a pause here and take note that the synthetic set up of 8 cubes as a structural set up of 125 components

brings us face to face with a pair of number values (8,125) which permits reorganization as $2^3, 5^3$.

30. One may have a pause here and permit the transcending mind to revisit the above features.
31. It would be a blissful exercise to chase the synthetic set up of 27 cubes to reach at its structural component value 343.
32. One may have a pause here and take note that the numbers value (27, 343) , permits reorganization as $3^3, 7^3$.
33. One may further have a pause here and permit the transcending mind to comprehend the pair of paired values [$(2^3, 5^3)$ and $(3^3, 7^3)$].
34. It would be blissful to take note that the next sequential terms would be $4^3, 9^3$.
35. One may further have a pause here and take note that the numbers pair (2,5) is parallel to the format (2 space, 5 geometries range of 2 space).
36. Further the numbers pair (3,7) is parallel to the format (3 space, 7 geometries range of 3 space).
37. Still further the numbers pair (4,9) is parallel to the format (4 space, 9 geometries range of 4 space).
38. In general the numbers pair (n, $2n+1$) is parallel to the format of (n space, $2n+1$ geometries of N space).
39. One shall sit comfortably and permit the transcending mind to glimpse all these features and imbibe their values fully to

acquire deep insight about the geometries range of 3 space and of other spaces.

SECTION –II, FRAMED DOMAIN

ASPECT 6, 3 SPACE FRAMED DOMAIN

1. 3 Space content manifests as domain fold of hyper cube 3 .
2. 3 space domain is a framed 3 space content lump.
3. 3 space content lump as domain fold accepts boundary fold as its geometric envelop.
4. Domain fold framed with in geometric envelop of domain fold also accepts a 3 dimensional frame with origin of 3 dimensional frame standing superimposed upon centre of domain fold.
5. Domain fold enveloped with in geometric envelop of boundary fold and having acceptance of a three dimensional frame with origin of three dimensional frame super imposed upon centre of the domain fold in designated as three space framed domain.
6. One may have a pause here and permit the transcending mind to glimpse the set up of 3 space framed domain .
7. When the centre of 3 space domain fold as a seat of origin fold gets sealed with super imposition of the origin of 3 dimensional frame, the 3 space framed domain is designated as sealed framed 3 space domain .
8. With it , framed 3 space domain becomes of dual set up features , firstly as sealed framed 3 space domain and secondly as non-sealed framed 3 space domain.

9. One may have a pause here and take note that the basic difference above pair of framed 3 space domain is in terms of its origin being sealed or otherwise.
10. This feature , in other words would mean that in case of sealed framed 3 space domain , no transcendence takes place at the origin.
11. Otherwise , in case of non-sealed framed 3 space domain , transcendence is permissible at origin of the domain fold.
12. One may have a pause here and permit the transcending mind to glimpse and imbibe the distinguishing features of sealed and non-sealed framed 3 space domain
13. One shall sit comfortably and permit the transcending mind to comprehend and imbibe distinguishably the differentiating feature of the set up which permits transcendence at the origin of the domain fold, from that of non-permissibility for transcendence at the origin of the domain fold.
14. One may further have a pause here and take note that the transcendence at the origin of the domain fold would mean the permissibility of transcendence for the order of domain fold through origin fold for reach at the base fold.
15. The other wise, the non-permissibility would mean there being no transcendence permissible for the dimensional order of the domain fold through origin for reach upto base of the origin fold.
16. One may have a pause here and take note that the origin fold is of a higher degree dimensional order than that of the domain fold.
17. The dimensional order of origin fold is one degree higher than that of the domain fold.
18. Illustratively 3 space is a linear order space while 4 space is a spatial order space.
19. As such 3 space domain fold is of a linear dimensional order, while 4 space in the role of origin of 3 space makes origin of 3 space domain as of a spatial dimensional order.

20. The seal at the origin of 3 space domain would mean that that centre of 3 space domain would be of dimensional order like that of any other point of 3 space domain.
21. Otherwise, with 3 space domain with its non-sealed origin will make centre of the cube as to be of a status different than that of all other points of the cube , as much as that while centre of the cube shall be acquiring the status of a spatial dimensional order while all other points of cube will remain of the format and features of a linear dimensional order.
22. One may have a pause here and take note that 3 space domain as sealed framed 3 space domain shall be making centre of 3 space bodies/cube being of status and feature of linear order like that of any other point of solids/cube.
23. In such a situation every point of 3 space domain shall be of structural format of synthesis of a pair of linear axis/dimension.
24. One may have a pause here and take note that this will bring us face to face with constituent point of 3 space domain being a structured point of synthesis of linear axes.
25. A reach from 3 space domain as manifested 3 space content to structural set up of constituents (structured point) of 3 space domain will bring us face to face with the challenges of understanding and comprehension of 3 space content .
26. One may further have a pause here and take note that this understanding and comprehension of format , features, values and virtues of 3 space content will further help us understand and comprehend the structured creations by different roles of 3 space domain, say as dimension fold, boundary fold, domain fold, origin fold and even base fold .
27. One may further have a pause here and take note that 3 space domain in the role of dimension would be a dimension fold of transcendental domain (5 space domain)

28. 3 space domain in the role of boundary shall be of the structural format of solid boundary of creator's space (4 space).
29. 3 space domain in the role of origin shall be the origin fold of hyper cube 2 /square.
30. 3 space domain as base shall be the base fold of hyper cube 1/interval.
31. One shall have a pause here and permit the transcending mind to continuously remain in prolonged sitting of Trans to comprehend and imbibe the above features and to acquire proper insight and enlightenment about 3 space content manifesting as domain fold and playing different roles .
32. It would be a blissful exercise to glimpse and imbibe the values of linear dimensional order structuring 3 space domain and potentialising it , as such , as 3 space content for playing different roles, prominent amongst them being as 3 space as dimension fold, 3 space as boundary fold, 3 space as domain fold, 3 space as origin fold and 3 space as base fold.
33. It would be a very blissful exercise to sequentially chase the emerging structural set ups during different roles of 3 space content.
34. One shall sit comfortably and permit the transcending mind to continuously remain in prolonged sitting of Trans and to acquire deep insight and thorough enlightenment about this phenomenon of different roles of 3 space domain as a structural 3 space content of linear dimensional order.

SECTION –II, FRAMED DOMAIN

ASPECT 7, CHASE OF TRANSCENDENCE AT ORIGIN OF 3 SPACE DOMAIN

1. 4 space plays the role of origin of 3 space
2. 4 space is a spatial order space while 3 space is a linear order space.
3. 4 space domain is structured by synthesis of spatial dimensions while 3 space domain is synthesized by linear dimension.
4. This will bring us face to face with lines being the structural constituents of 3 space domain while surfaces being the structural constituents of 4 space domain.
5. This will further bring us face to face with the feature of surface carrying the line (Lines) .
6. 3 space domain as linear order domain , as such may have transcendence from line through origin being a spatial order 4 space set up.
7. One may have a pause here and take note that this transcendence permissibility is naturally because of availability for the lines of surfaces as carriers.
8. It is this transmission of linear order structures, which deserves to be visited and revisited.
9. One may have a pause here and take note that spatial order itself is the existence phenomenon with in a dimensional frame of a pair of dimension.
10. As such the transcendental carrier for the lines may be parallel to either of the pair of axes of dimensional frame of spatial order itself.
11. One may further have a pause here and take note that the availability of spatial format will facilitate synthesis for a pair of lines (linear axis/linear order set ups).
12. It is this feature of transcendence for the linear order through the spatial order origin which deserves to be comprehended well and to be thoroughly imbibed as synthesized structure would be of a solid domain format and one of the roles for the 3 space domain is as of solid dimensional order.
13. One may have a pause here and take note that 5 space plays the role of origin of 4 space.

14. Further as that 5 space is a solid order space.
15. Still further as that 5 space plays the role of base fold as base for 4 space as origin fold of 3 space domain.
16. One shall sit comfortably and permit the transcending mind to continuously remain in prolonged sitting of Trans and to be face to face with above phenomenon of transcendence of linear order through spatial order origin and having a reach upto solid order base.
17. One may further have a pause here and take note that the origin being of a spatial order, the same as such shall not only be super imposing addition and multiplying operation but also the same as well would be super imposing the opposite orientation too.
18. One may have a pause here and take note that $4 = 2 + 2 = 2 \times 2 = (-2) \times (-2)$.
19. One may further have a pause here and take note that it is because of this feature of spatial order origin, the same simultaneously as well shall be making it permissible for reverse transcendence i.e. ascendance from base fold through origin to the domain fold.
20. One may further have a pause here and take note that the numbers value triple $(-1, 0, 1)$ is a unique triple as much as that it retains the value $(-1, 0, 1)$ for all odd powers as well, i.e. for $(-1^{2n+1}, 0^{2n+1}, 1^{2n+1})$.
21. One may further have a pause here and take note that the numbers value sequence $(-5, -3, -1, 1, 3, 5 \dots)$ is parallel to the geometric format sequence (sequence of dimension of dimension, dimension, domain for every triple consecutive values of the above sequence namely $(N, N+2, N+4)$).
22. One may further have a pause here and take note that the linear order transcendence from 3 space domain through spatial order origin along any of its axis to solid order base, and reverse ascendance starting from solid order base through spatial order origin to linear order domain, as such

- would be of formats parallel to the formats of pair of orientations of line/interval/hyper cube 1 domain fold.
23. One shall sit comfortably and permit the transcending mind to continuously remain in prolonged sitting of Trans and to glimpse above two fold transcendence phenomenon (transcendence from domain fold to base fold and back from base fold to domain fold through origin fold.) and to fully imbibe the features and values of this phenomenon.
 24. One may further have a pause here and take note that the spatial order because of its unique features $4 = 2+2 = 2 \times 2 = (-2 \times -2)$ together with $0 = 0+0=0 \times 0 = (-0) \times (-0)$ will make value sequence (-- -4, -2, 0, 2 , 4 --) to be of unique sequence of second limb of dimensional spaces availing the format of dimension of dimension, dimension and domain for consecutive triple members of the sequence.
 25. However, the basic difference of this limb (to be designated as of even order spaces) from that of the first limb (being designated as of odd order spaces) is that here in this case of even order spaces, the values triple (-1, 0, 1) acquires the format (1, 0, 1) because of even powers and this transformation further folds it for working in terms of its pair of halves (1, 0) and (0, 1) as a permissibility to work out the same in terms of only one half thereof.
 26. One shall sit comfortably and permit the transcending mind to glimpse this distinguishing feature of the even order and of odd order space.
 27. One may further have a pause here and take note that in case of even spaces permissibility for working out in terms of only one half , as such shall be making the working unit being ($\frac{1}{2}$).
 28. This will bring us face to face with the working with full boundary , vis-à-vis working with half boundary .
 29. However, working with half boundary, has its own challenge when it is to be made as a complete system for even and odd order spaces to be handled simultaneously.

30. It is this challenge which is becoming difficult for the modern system while modern systems are confronted with the situations like that of every where derivable but no where continuous functions.
31. One shall sit comfortably and permit the transcending mind to continuously remain in prolonged sitting of Trans and to glimpse above features of transcendence phenomenon of linear order of 3 dimensional frame through spatial order origin for its reach to solid order base and back from solid order base to linear order domain through spatial order origin.
32. This feature of two fold transcendence at transcendental boundary (5 space as boundary) of self referral domain (6 space as domain) , which is simultaneously available with in self referral domain itself as well , deserves to be glimpsed and imbibed for enrichment of insight for thorough enlightenment about the transcendence phenomenon.
33. It would be a blissful exercise to continuously visit and revisit the simultaneous two fold transcendence phenomenon happening at the transcendental boundary (5 space as boundary) as well as with in self referral domain (6 space as domain).

SECTION –II, FRAMED DOMAIN

ASPECT 8, CHASE OF DOMAIN FOLD ITSELF

1. Availing domain fold as a tool is one thing .
2. And chasing domain fold itself is another thing.
3. The value equality $1 = 1^1 = 1^3$ gives us an insight that domain fold as a format and its sequential application may help us develop a system to use domain as a tool for chase of domain.

4. One may have a pause here and take note that a reach from 1^1 to 1^3 and a step ahead a reach from 1^3 to 1^5 gives us an insight about availability of domains sequence.
5. One may have a pause here and revisit interval, square and cube .
6. Interval is hyper cube 1 and it has one space content lump as its domain fold.
7. Square is hyper cube 2 and it has two space content lump as its domain fold.
8. A step ahead, cube is hyper cube 3 and it has 3 space content lump as its domain fold
9. Taking 1^1 as domain fold of hyper cube 1 , 1^2 as domain fold of hyper cube 2 and 1^3 as domain fold of hyper cube 3 and further as $1^1 = 1^2 = 1^3 = 1 = 1^0$ will help us have a insight as to how the domain fold format as such shall be bringing us face to face with domain as a tool for a reach to domain itself as a system.
10. Further, let us revisit the structural set up of an interval, square and cube again
11. It will come to light that interval with a pair of end point as a set up of 3 structural component will permit us chase it as $(1+2)^1$.
12. Likewise square with its boundary contributing four boundary lines and four corner points as such will become a structural set up of 9 structural components in all which will permit its reorganization as $(1+2)^2$.
13. A step ahead a look at the set up of the cube will bring us face to face with cube as being with geometric envelop stitched as 6 surfaces, 12 edges and 8 corner points, together making it out being the set up of 27 structural components which permit the chase as $(1+2)^3$.
14. One may have a pause here and take note that the above features of interval square and cube , as such are the features of sealed framed domains .
15. Further as that the above features are of framed domains of sealed origin .

16. However, the above features are only because of boundary fold as geometric envelop as a boundary frame.
17. This single frame in respect of interval, square and cube as sealed framed domains with in their respective boundary fold make out as of a sequential order accepting common formulation $(1+2)^n$, $N=1,2,3$.
18. One may further have a pause here and take note that if the interval square and cube are the set ups of length A^1 , area A^2 and volume A^3 even then with points as A^0 , the structural set ups of such interval, square and cube as well would be of structural components 3, 9 and 27 and these would permit single formulation set ups of $(1^1+2a^0)^n$, $N=1,2,3$.
19. One may further have a pause here and take note that interval, square and cube are of the formats of hyper cube 1, hyper cube 2 and hyper cube 3 respectively.
20. Hyper cube 1 is a four fold manifestation layer of values parallel to quadruple number values $(-1, 0, 1, 2)$.
21. Hyper cube 2 is a four fold manifestation layer of values parallel to quadruple number values $(0, 1, 2, 3)$.
22. Hyper cube 3 is a four fold manifestation layer of values parallel to quadruple number values $(1, 2, 3, 4)$.
23. One may have a pause here and take note that four folds format of hyper cubes is of values of (dimension fold, boundary fold, domain fold, origin fold).
24. Further as that the four fold values (dimension fold, boundary fold, domain fold, origin fold) is of values sequences $(N, N+1, N+2, N+3)$.
25. One may further have a pause here and take note that the above four fold format will further lead us to 4×4 formats with each fold itself again being a four fold format leading to 4×4 metrix /grid values set up as under:

N	N+1	N+2	N+3
N+1	N+2	N+3	N+4

N+2	N+3	N+4	N+5
N+3	N+4	N+5	N+6

26. One may have a pause here and take note that this organization avails 7 steps long values range (N, N+1, N+2, N+3, N+4, N+5, N+6).
27. One may have a pause here and take note that 3 space accepts 7 geometries range and parallel to it there are 7 versions of cube.
28. One may further have a pause here and take note that this brings us face to face with cube as hyper cube 3 is having 7 versions for the domain fold ,
29. One may further have a pause here and take note that the sequential range of N x N grid formats i.e. (1x1, 2x2, 3x3, 4x4, 5x5, ---) lead us to summation values for the values of all the rows and all the columns as values sequence ($1^3, 2^3, 3^3, 4^3, 5^3, \dots$).
30. It would be a blissful exercise to sequentially chase the organizational expressions of values of NxN matrix/grid format for their summation values as under:

1 x 1	1		
1	$=1^3$		
2 x 2	1	2	
	2	3	
8 = 2 ³			
3x3	1	2	3
		2	3
			4

	3	4	5	
$27 = 3^3$				
4×4	1	2	3	4
	2	3	4	5
	3	4	5	6
	4	5	6	7
$64 = 4^3$				

31. Like that further the synthesis of number of cubes will lead to the following structural features:

i) Single cube has 27 components which leads to 1^3 and 3^3 coordination as

one space has 3 geometries range.

ii) Eight cubes have 125 components which leads to 2^3 and 5^3 coordination as 2 space has 5 geometries range.

iii) 27 cubes have 343 components which leads to 3^3 and 7^3 coordination as 3 space has 7 geometries range.

iv) N^3 cubes have $(2N+1)^3$ components which leads to N^3 ($2N+1$)³ coordination of N space with $2N+1$ geometries range.

32. One may further have a pause here and take note that N, NxN and NxNxN as numbers value chase and parallel to it of geometric format chase in reference to the domain fold, in the context of 3 space as domain fold, makes a blissful study of the features of Vedic systems.

33. One shall sit comfortably and permit the transcending mind to continuously remain in prolonged sitting of Trans for chase of sealed framed 3 space domain .
34. Further , it also would be a blissful exercise to chase structural creations by sealed framed 3 space domain in different roles as dimension fold, boundary fold, domain fold , origin fold and base fold, taking the contribution by the internal structural set up of sealed framed 3 space domain itself.
35. It would be a very blissful exercise to tabulate the above structural creations by different roles being played by sealed framed 3 space domain.

SECTION –II, FRAMED DOMAIN

ASPECT 9, LINEAR, SPATIAL AND SOLID DIMENSIONAL SYNTHESIS

1. Sealed framed 3 space domain is the set up of 3 space content lump manifesting as domain fold enveloped by spatial boundary envelop and accepting linear dimensional frame with origin of dimensional frame super imposed upon the centre of the domain fold.
2. The synthesis of linear, spatial and solid domains with in 3 space domain while the linear spatial and solid domains being in the roles of dimensions is the phenomenon which deserves to be comprehended well for appreciation and imbibing of the values of 3 space VMS&T.
3. The synthesis of linear domain folds in the role of dimension as linear axes sequentially lead to synthesis value (1, 3,6,10,15,21,28,36,45, ---).
4. The spatial domain in the role of spatial dimensions synthesized and lead to sequential synthesis values range (2,4,6,8,10,12,14,16,18, ---).

5. Solid domain as solid dimension synthesizes sequential values range (3,5,6,6,5,3,0,, ---).
6. One may have a pause here and take note that differences sequential range of difference values of synthesis values sequence of linear dimensional synthesis and spatial dimensions synthesis comes to be (-1, -1,0, 2,2+3, 2+3+4, 2+3+4+5, 2+3+4+5+6, ---).
7. One may have a pause here and take note that the above difference values range (-1, -1, 0, 2, 5,9,14,20,27,---) as a sequential diminishing rule will take us from the synthesis value of spatial dimensions to the synthesis value sequence of solid dimension synthesis.
8. One may further have a pause here and take note that above diminishing value rules will sequentially apply ahead from synthesis value range of solid dimensions to synthesis value rule of hyper cube 4 , and so on.
9. One shall sit comfortably and permit the transcending mind to continuously remain in prolonged sitting of Trans and to glimpse the diminishing rule of sequential synthesis of a pair of dimensional order dimensions/axis.
10. One shall further sit comfortably and permit the transcending mind to revisit the synthesized domains parallel to synthesis value and to reach back from synthesized domains to synthesizing dimensions.
11. This reverse process of reach from synthesized domain to the synthesizing constituent dimensional axis may be designated as the domains split spectrum
12. One may have a pause here and take note that a pair of linear dimensions synthesize synthesis value 3 parallel to which is 3 space domain.
13. One may have a pause here and take note that this reach from a pair of values (1,1) to value 3 is because of (-1) unit value being contributed for the synthesizing glue unit value because of the dimension of dimension of 1 space i.e. by (- 1) space.

14. One may have a pause here and take note that this leads to dimensional synthesis equation as under:-
 $1 + 1 - (-1) = 3$
15. In general the rule is $N+N - (N-2) = N+2$
16. One may have a pause here and take note that dimensional synthesis and reverse of it, the dimensional domains split process takes care of dimension of dimension role as dimensional synthesis glue values units provider.
17. Illustratively the dimensional synthesis ($8,8 = 10$, in the reverse process would be permitting expression as $10 = (8,8)$).
18. This in fact is not expressing the specific role of six space as dimension of 8 space and being dimension of dimension of 10 space.
19. Therefore, the full expression shall be $(8, 8, -6) = 10$.
20. And other way round it shall be $10 = (8,8,6)$.
21. A step ahead $8 = (6,6,-4)$.
22. Like that sequentially reach would be $6 = 4,4-2$) and $4 = 2,2,-0$) and so on.
23. One may have a pause here and take note that above sequential steps at the

first step shall be making available single 10 space domain.
24. At the second step, there would be an availability of 2 domains of value 8

space.

25. A step ahead i.e. at third step there would be an availability of 5 domains of

value 6.

26. At fourth step, there would be an availability of 12 domains of value 4.

27. At fifth step there would be an availability of 29 domains of value of space 2.

28. At sixth step there would be an availability of 70 domains of 0 space value.

29. One may have a pause here and take note that 10 space in the role of dimension shall be synthesizing sequential values (10,12,6, -8, 0,0).

30. One shall sit comfortably and permit the transcending mind to continuously remain in prolonged sitting of Trans and to glimpse and imbibe the features and values of dimensional synthesis values, as well as of dimensional domains split spectrum.

31. It would be a blissful exercise to visit and revisit this phenomenon in respect of 3 space domain

32. The solid dimensions synthesis value sequence is (3,5,6,6,5,3,0, ---).

33. The dimensional domain split spectrum for 3 space domain comes to be as

3.
 - i) At first step, as single domain of domain value of space
 - ii) At second step, as 2 domains of domain value of space -
 - iii) At third step, as 5 domains of domain value of space (- 3).
 - iv) At fourth step, as 12 domains of domain value of space (-5).
 - v) At fifth step as 29 domains value of space (-7).
 - vi) At sixth step as 70 domains of domain value of space (- 9).
34. One shall sit comfortably and permit the transcending mind to continuously remain in prolonged sitting of Trans and to glimpse and imbibe the values of dimensional synthesis and of dimensional domain split spectrum for 3 space domain .
35. It would be a very blissful exercise to chase this dual phenomenon in respect of one space domain and also in respect of 2 space domain.
36. One shall sit comfortably and permit permit the transcending mind to continuously remain in prolonged sitting of Trans and to glimpse and imbibe the phenomenon of dimensional synthesis and of dimensional domain split spectrum simultaneously taking place in reference to one space domain, two space domain and three space domain within 3 space domain as a sealed framed 3 space domain..
37. It is this simultaneous synthesis and split spectrum with in sealed framed 3 space domains simultaneously happening in reference to 1 space domain of the format of single axis, 2 space domain parallel to pair of dimensions and 3 space

domains parallel to all the 3 dimensions of 3 dimensional frame deserves to be comprehended well and to be thoroughly appreciated for its complete imbibing to acquire deep insight and enlightenment about the existence phenomenon in reference to 3 space domain, being of the format and features of Triloki (3 spaces having coordinated existence with in Creator's space i.e. 4 space) with its seat as origin of 3 space..

SECTION –III, TRILOKI & TRIMURTI

ASPECT 10, TRILOKI & TRIMURTI

1. Lord Brahma, Lord Shiv and Lord Vishnu together are Trimurti.
2. Lord Brahma is the presiding deity of 4 space.
3. Lord Shiv is the presiding deity of 5 space.
4. Lord Vishnu is the presiding deity of 6 space.
5. Trimurti as 3 Lords are the presiding deities of 3 spaces namely “ 4 Space, 5 space, 6 Space”.
6. One may have a pause here and take note that “ 1 space, 2 space, 3 space” constitutes one set of 3 spaces.
7. “4 space, 5 space, 6 space” constitute another set of 3 spaces.
8. A 3 dimensional frame permits a split in to a pair of 3 dimensional frame of half dimensions of opposite orientations.
9. One may have a pause here and take note that 4 space plays the role of origin of 3 space.
10. Centre of cube is the seat of origin of 3 dimensional frames.
11. Centre of cube, parallel to origin of 3 space , is the seat of 4 space in the role of origin.
12. Centre of cube is also the seat of inner most corner points of 8 sub cubes.
13. One may have a pause here and take note that 4 space as 4 space domain accepts solid boundary of 8 components.
14. With it centre of the cube , becomes of a dual status , firstly as point of 3 space domain and secondly as point of 2 space domain.
15. One may have a pause here and take note that this brings us face to face with the organization of 3 dimensional frame as a synthetic set up of a pair of 3 dimensional frames of

half dimensions of opposite orientations and origin of 3 dimensional frames being the seat of 4 space.

16. This, as such brings us face to face with the organization of 3 dimensional frames being parallel to triple numbers value (3,4,3) .
17. One may further have a pause here and take note that synthesis value of a pair of solid dimensions (3,3)= 5 parallel to the value of transcendental domain (5 space as domain)
18. Still further as that $3 \times 3 = 6$.
19. One may have a pause here and take note that 6 points coverage is for five linear units range coverage.
20. Still further as that 4 space is a spatial order space and as such the pair of axis for the spatial order will permit expression range for a pair of 4 space set ups which shall be leading to (4,4)=6.
21. Still further as that the numerals 3 and 6 in their Devnagri script are of script form which makes them as a reflection pair .
22. Still further $4 = 2+2 = 2 \times 2 = (-2) \times (-2)$ and $0 = 0+0 = 0 \times 0 = (-0) \times (-0)$ shall be bringing us face to face with the phenomenon of compactification of origins at centre of the cube .
23. In other words 4 space as origin of 3 space, 5 space as origin of 4 space and 6 space as origin of 5 space , all simultaneously mark their presence at the centre of cube.
24. Still further as that that 4 space, 5 space and 6 space sequentially unfold themselves at centre of the cube as a transcendence phenomenon for 3 space domain through its centre/origin for its reach at the base fold , and a step ahead as the format of the base fold of the origin of 3 space itself.
25. One shall sit comfortably and permit the transcending mind to continuously remain in prolonged sitting of Trans and to glimpse this phenomenon of sequential unfolding of 4,5 and 6 spaces at the centre of the cube/origin of 3 space itself.

26. One shall glimpse and imbibe the values of above phenomenon .
27. This is the phenomenon of Trimurti, creating, sustaining and transforming Triloki .
28. One may have a pause here and take note that the six steps long values range (0, 1,2,3,4,5) permits reorganization as $0+5$, $1+4$ and $2+3$.
29. Still further the six steps long range of values points (0,1,2,3,4,5) as a coverage range of 5 units values range (1,2,3,4,5) permits reorganization as ($1+5 = 2+4 = 2 \times 3$)
30. One may have a pause here and take note that this brings us face to face with the format and features for reorganization of 5 values range (1,2,3,4,5) in to a triple concentric circles with the outer most circle having values for end points of its diameter as (1,5) with summation value ($1+5 = 6$).
31. The first inner circle shall be having end values or its diameter as (2,4)with summation value ($2+4=6$).
32. However, the inner most circle as a single point circle would be of value "3" which is half half value 6.
33. One shall sit comfortably and permit the transcending mind to continuously remain in prolonged sitting of Trans and to comprehend and imbibe the values of this organization of 5 values range as 3 concentric circles as above.
34. One may have a pause here and take note that numbers pair (5,3) is parallel to the format (5 space as domain, 3 space as dimension).
35. Further as that that $3 + 3=6$ and (3,3) = 5.
36. Still further as that 6 points range is a coverage for 5 units range.
37. One may further have a pause here and take note that end points on the circumference of a circle splits the circumference into N parts (Archs)
38. One may further have a pause here and take note that 3 space in the role of dimension structures transcendental

- domain (5 space as domain) as domain fold of hyper cube 5 , as a four fold manifestation layer (3,4,5,6).
39. One shall sit comfortably and permit the transcending mind to visit and revisit four fold manifestation layer (3,4,5,6) as a pair of set ups (3) and (4,5,6) parallel to existence format of Triloki (3) and Trimurti (4,5,6).
 40. One may further have a pause here and take note that $3 = 3 = 3 \times 1$ and $4 + 5 + 6 = 15 = 3 \times 5$, which will bring us face to face with the features of solid dimensional frame of 5 solid dimensions of 5 space.
 41. One shall sit comfortably and permit the transcending mind to continuously remain in prolonged sitting of Trans to glimpse the phenomenon of existence of Triloki , its creation, sustenance and transformation by Trimurti
 42. One may further have a pause here and take note that four fold manifestation layer (3,4,5,6) shall be extending to transcendence range (3,4,5,6,7) .
 43. It would be a blissful exercise to revisit the transcendence range (3,4,5,6,7) with summation value $3+4+5+6+7 = 25$ and its reorganization along the format of triple concentric circles shall be making inner most circle being of value 7 , while the outer pair of circles shall be of values 9 each.
 44. One may further have a pause here and take note that synthesis value $(-9,-9) = (-7)$.
 45. It would be a very blissful exercise to take note that the synthesis value $(9,9) = 11$.
 46. Still further as that the four fold manifestation layer (3,4,5,6) permits reorganization as a pair of parts of values $3 + 4 = 7$ and $5 + 6 = 11$.
 47. One shall sit comfortably and permit the transcending mind to continuously remain in prolonged sitting of Trans and to glimpse and imbibe the features and values of above organization and to acquire insight about Triloki and Trimurti as the phenomenon of our Solar Universe (Sun/6 space as the origin source reservoir).

48. One may further have a pause here and take note that synthesis value of triple dimension of any order is of value 6 , i.e. $(n,n,n)=6$.

SECTION –III, TRILOKI & TRIMURTI

ASPECT 11, DIFFERENT ROLES OF 3 SPACE.

1. One way to acquire insight about Triloki is to glimpse different roles of 3 space (content domains)
2. 3 space content manifests as 3 space domain of hyper cube 3 /cube.
3. 3 space plays the role of dimension (solid dimension of transcendental domain/ 5 space domain) .
4. This, as such will bring us face to face with the format of four fold manifestation layer (3,4,5,6) .
5. It shall be further bringing us face to face with its extension as transcendence range (3,4,5,6,7) .
6. The summation value of transcendence range (3,4,5,6,7) comes to be $3+4+5+6+7 = 25$.
7. With in Creator's space (spatial order space) , pair of such transcendence ranges shall be yielding value as $25 + 25 = 50$
8. This synthesis of transcendental ranges shall be bringing in value 3 parallel to the value of solid order (3 space in the role of dimension).
9. This way we will be acquiring value $50+3=53$.
10. One may have a pause here and take note that the number value 53 is availing a pair of digits (3,5) with unit place value digit (3) and next 10 place value (5).
11. One may further have a pause here and take note that the values pair (3,5) is also parallel to the format (3 space as dimension, 5 space as domain) .

12. One shall sit comfortably and permit the transcending mind to continuously remain in prolonged sitting of Trans and to glimpse this format, features and values of synthesis of transcendence ranges with in spatial order Creator's space.
13. One may have a pause here and take note that in general the transcendence range ($N, N+1, N+2, N+3, N+4$) shall be synthesizing with another range of this value by availing value 9 parallel to the role of N space as dimension fold and thereby the total emerging value shall be $11N + 20$.
14. One may have a pause here and take note that $N = 3$ is the special case which leads to synthesis value 53 .
15. Another role of 3 space is as the boundary fold of hyper cube 4 .
16. One shall sit comfortably and permit the transcending mind to glimpse and imbibe the values of structural set up of hyper cube 4 accepting solid boundary and solid order origin .
17. One may have a pause here and take note that with in creative domain (4 space as domain) there happens a transcendence phenomenon for the spatial order of 4 space domain as spatial order translation with its being carried by the solid order of transcendental origin for its reach at the creative order base.
18. One shall sit comfortably and permit the transcending mind to continuously remain in prolonged sitting of Trans and to glimpse this transcendence phenomenon for the spatial order domain through solid order origin into creative order base , and also the reverse ascendance from creative order base through solid order origin in to spatial order domain.
19. The other role of 3space is as the origin fold of hyper cube 2 .
20. One may have a pause here and take note t hat 2 space is a zero order space.
21. Zero order space , as 2 space is it brings us face to face with number value 20 as of organization ($1+2+3+4$) + $0+(1+2+3+4)$.

22. One may have a pause here and take note that this format and its features and values of zero order 2 space set up deserves to be comprehended well and to be thoroughly imbibed as formation “ Ved” accepts 20 as transcendental code value.
23. Still further as that the transcendental code value for the formulation Dev , as well, is 20.
24. One shall sit comfortably and permit the transcending mind to continuously remain in prolonged sitting of Trans and to glimpse the role of 3 space as origin fold of zero order 2 space.
25. It is this role of 3 space which deserves to be comprehended well and to be thoroughly appreciated for its complete imbibing to acquire deep insight and full enlightenment about the organization format, as well as values and virtues of Vedic knowledge.
26. 3 space as domain is enveloped with in a spatial boundary.
27. It remains integrated in terms of 3 dimensional frame of 3 linear dimensions.
28. The integration format of 3 space domain is of values parallel to the range of synthesis value of linear dimensions.
29. One may have a pause here and take note that 3 dimensional frames is a set up of 3 linear dimensions.
30. The synthesis value of triple linear dimensions is “ 6”.
31. Further as that the synthesis value of triple dimension of any order as well is 6.
32. One may have a pause here and take note that it is this feature of reach of 3 dimensional frame, which makes it to be of unique feature.
33. It is this uniqueness of 3 dimensional frame which deserves to be comprehended well and to be thoroughly appreciated for its complete imbibing to acquire deep insight and enlightenment about 3 space itself as well as about the existence phenomenon of Triloki.

SECTION –III, TRILOKI & TRIMURTI

ASPECT 12, SATHAPATYA MEASURING ROD

1. Basic tool settled by Vedic systems is of Sathapatya Measuring Rod.
2. Organization of Vedic knowledge, as well as of Vedic system tool, can be chased along the format of Sathapatya Measuring Rod.
3. The format of Sathapatya Measuring rod, as such becomes the starting point as well as the end reach point.
4. Starting it Sathapatya Measuring Rod, one may reach another basic tool namely the alphabet (Devnagri alphabet format) .
5. Devnagri alphabet format, as well is structurally rich enough to be the starting point, as well as the end reach point of the chase of Vedic knowledge.
6. Chase of existence phenomenon along the Sathapatya Measuring Rod is the basic choice of Vedic Mathematics Science and Technology.
7. Sathapatya Measuring Rod format is the synthetic set up of hyper cubes 1 to 6 .
8. The chase along this format in terms of artifices of numbers is the unique success of the Vedic system.
9. This success lies in reducing whole range of values parallel to the values of numbers.
10. With this attainment everything becomes as natural as of the natural numbers themselves.
11. A reach from Sathapatya Measuring Rod to artifices of numbers and back from artifices of numbers to Sathapatya Measuring Rod deserves to be chased to comprehend and imbibe the Vedic system and Vedic knowledge.
12. Likewise a reach from Sathapatya Measuring Rod to Devnagri alphabet and back from Devnagri alphabet to

Sathapatya Measuring Rod as well deserve to be chased to comprehend and imbibe the Vedic systems and Vedic knowledge.

13. Likewise the reach from Devnagri alphabet to values of numbers and back from values of numbers to Devnagri alphabet , as well deserves to be chased for its comprehension and imbibing to imbibe the values of Vedic system and Vedic knowledge.
14. This way the unification of dimensional frames, artifices of numbers, sound frequencies and light frequencies will be available as organized by Vedic systems.
15. The chase of Vedic knowledge in terms of Vedic systems will ultimately amount to the chase of the existence phenomenon along geometric format in terms of values of numbers parallel to sound frequencies and light frequencies.
16. It is this chase of existence phenomenon with in frames and beyond frames, which is aimed at by Vedic Mathematics Science and Technology.
17. This chase of Vedic Mathematics Science and Technology brings us face to face with the chase on first principles (axioms and postulates) organized as Ganita Sutras (and Upsutras).
18. This, this way makes the chase of the range of Sathapatya Measuring Rod a the starting point and Ganita Sutras as the end reach.
19. This chase is of the values of reverse steps having Ganita Sutras as the starting point and Sathapatya Measuring Rod as the end reach point.
20. One may have a pause here and take note that ultimately and it is the existence phenomenon itself which is the subject matter of chase of Vedic systems.
21. The existence phenomenon is being approached as a single integrated whole some phenomenon as the single discipline range and that being so the Vedic knowledge is the wholesome single discipline of knowledge being worked out

- by single alphabet and single measuring rod format i.e. of Sathapatya Measuring Rod and Devnagri alphabet.
22. The existence phenomenon is being chased in terms of human frame.
 23. The existence with in and beyond human frame is the existence phenomenon of parallel values .
 24. It is this feature which at the base of the organization value of Vedic knowledge as a single wholesome discipline being worked with in human frame as chase of Solar universe along Sathapatya Measuring Rod and in terms of articulated sounds of Devnagri alphabet.
 25. One shall sit comfortably and permit the transcending mind to glimpse all these features of Vedic systems and to imbibe the same to acquire proper in sight enlightenment about Vedic systems and Vedic knowledge as well.

SECTION –III, TRILOKI & TRIMURTI

ASPECT 13, GANITA SUTRA 1 FORMAT

1. Ganita Sutra 1 “ Eka Adhikena Purvena” literally means one (step) more than (ahead) of (value) at East (Placement).
2. At East placement is Sun.
3. A step ahead of Sun is reach at Polestar.
4. Sun (Value 6) and Polestar (Value 7) , that way makes the attainment as a reach from 6 space (hyper cube 6 format) to 7 space (hyper cube 7 format)
5. One may have a pause here and take note that the chase along the format of Sathapatya Measuring Rod, as such would be chase of the reach of hyper cube 6 (domain) .

6. This beginning of chase with in 6 space domain , as such would be of the range of reach upto 7 space (in the role of origin of 6 space domain).
7. One may have a pause here and take note that the first letter of the text of Ganita Sutra 1 is the sixth vowel .
8. The last letter of the text of Ganita Sutra 1 is the first vowel.
9. One may further have a pause here and take note that Lord Krishna , incarnation of Lord Vishnu , enlightens Srimad Bhagwat Geeta as that amongst syllables, he is the first syllable.
10. It is this reach from sixth vowel to first vowel as syllable , deserves to be comprehended well .
11. One may further have a pause here and take note that Patanjala Yog Darshan in its Vibhootipada enlightens about the Sidhhi of Bhuvans by having Yogic disciplines (Sayyam) of Dhyan, Dharna and Smadhi) upon Surya (Sun) .
12. One may have a pause here and take note that there are 14 Bhuvans.
13. Further a further have a pause here and take note that one shall be face to face with the reality of a last few centuries commentaries and Gurukul tradition of teaching and practice of Yogic discipline values of this Sutra and this will help us appreciate as to how the Vedic systems values have gone out of the comprehension reach of these generations.
14. With this background, it can be said that the ancient wisdom deserves to be revived by approaching ancient wisdom, the ancient wisdom way , and for it beginning is to be made afresh .
15. This as such brings to focus the necessity for reviving the learning and teaching of ancient wisdom in the right earnest and in a systematic sequential steps.
16. Vedic Mathematics is the basic values reservoir .
17. Let us initiate ourselves well in terms of Ganita Sutras.
18. Vedic group of disciplines deserves to be introduced as main stream schooling instructions .

19. The fortunate thing is that the values of Vedic systems are well preserved and these have the potentialities to revive the ancient wisdom of its original glory.
20. It is only the intensity of our urge to know which is wanting .
21. The revival of ancient wisdom will also help the modern mind to melt its mental blocks.
22. The mental blocks and mathematical knots being confronted by present day system will be having blissful answers from the ancient wisdom values and virtues.
23. The humanity at large is going to be benefited manifold by revival of the ancient wisdom.
24. It is not only the health concerned, but also the happiness index of the individuals and groups as well finds bliss with this happening of revival of the ancient systems.
25. Our understanding of the existence phenomenon on the whole is bound to be transformed.
26. Many of the distortions of present day life style will wither away of their own
27. It may be out of conceptual comprehension of many as that that existence with in human body is of the order of whole of the Universe.
28. It would be blissful to be through the contents index of Chark Samhita.
29. The values of this scripture deserve to be visited and revisited for their comprehension and imbibing .
30. Let us approach Vedic knowledge with urge of intensity to know and to imbibe its values and virtues.
31. It would be blissful to chase the existence phenomenon in terms of unified values format of Vedic systems.
32. Unification of geometric format numbers values , sound light frequencies , intelligence and consciousness bits and all that are awaiting to be availed by us .

ASPECT 14, ORGANIZATION OF RIGVED SAMHITA

1. Success of Vedic system lies in parallel chase of knowledge and organization of knowledge.
2. One way to put it may be as that pure and applied knowledge run parallel to each other.
3. The chase of knowledge as a single wholesome discipline simultaneously covering all values of pure and applied nature of knowledge, is the unique feature of ancient wisdom systems.
4. Rigved Samhita is the source scripture of Vedic knowledge .
5. Originally there was one way .
6. This scripture was organized as four scriptures/Vedas namely Rigved, Yajurved ,Saamved and Atharved.
7. Further these were elaborated as 21, 101,1000 and 9 branches respectively.
8. Each of these 1131 branches had distinct samhita, brahmana, aryanak and Upnisad, this this way makes a big range of 4524 vedic scriptures.
9. Further each Ved has distinct Upved namely Ayurved is the Upved of Rigved; Dhanurved is the Upved of Yajurved; Gandharv Ved is the Upved of Saamved and Sathapatya Ved is the Upved of Atharv Ved.
10. Though all the scriptures have not reached us but fortunately Sakla Rigved Samhita has reached us in its entirety beginning with it first syllable and reaching upto its last 432000th .
11. As the tradition goes, whole range of Vedic scriptures can be reconstructed and revived in terms of the values of Sakla Rigved Samhita itself.
12. Sakla Rigved Samhita is a scripture of 432000 syllables.
13. Out of it 34735 syllables are unmanifest (unwritten).
14. The remaining text in written form is the text of 397265 syllables.

15. This text is organized as 10552 richas.
16. These richas are organized as 1024 sukhtas and 2028 vergas.
17. Still further these sukhtas and vergas are organized as 85 anuvaks.
18. This is further organized as 10 mandals and 8 ashtaks.
19. This organization deserves to be comprehended and imbibed by its chase along the Sathapatya Measuring Rod format.
20. This chase along the Sathapatya Measuring Rod format shall be bringing us face to face with the manifestation format of Creator's space .
21. Further it shall also be bringing us face to face with the transcendence through the manifested creation .
22. This transcendence through the manifested creation is of transcendence range format of the transcendental origin of Creator's space.
23. The organization of Sakla Rigved Samhita text and the values of Rigved run parallel to each other .
24. This chase of values of Rigved Samhita along the organization format of Rigved Samhita shall be bringing us face to face with the values of Rigved accepting further leads to Yajur Ved , Saamved and Atharav Ved values.
25. One may have a pause here and take note that the values of Ayurved, the Upved of Rigved are the applied values of Rigved.
26. It would be a blissful exercise to chase organization of Chark Samhita along the format of Sathapatya Measuring Rod.
27. One may have a pause here and take note that Sathapatya ved, the Upved of Atharv Ved is the basic applied value source for the discipline of Vedic Mathematics Science and Technology.
28. Sathapatya Upved accepts Sathapatya Measuring Rod as the basic chase format.

29. With it , the Sathapatya Measuring Rod becomes the basic tool of Vedic Mathematics Science and Technology.
30. Sathapatya Measuring Rod being the basic tool of Vedic Mathematics Science and Technology as such the initiation of the knowledge of the discipline of Vedic Mathematics Science and Technology, matter can be had with the understanding of the format and features of the Sathapatya Measuring Rod.
31. Sathapatya Measuring Rod is the synthetic set up of hyper cubes 1 to 6.
32. Hyper cube is of the format of four fold manifestation layer.
33. These four folds of manifestation layers are a set of 4 consecutive dimensional spaces.
34. This, as such makes it possible to have simultaneous chase in terms of Yoga Nishtha and Sankhya Nishtha as Yoga Nishtha avails numbers presuming the existence of geometric format while Sankhya Nishtha avails numbers presuming the existence of geometric format.
35. With this the simultaneous availability of numbers and geometric formats, Vedic systems acquire very rich range of potentialities to work out sound and light frequencies, as well as intelligence and consciousness bits .
36. One shall sit comfortably and permit the transcending mind to continuously remain in prolonged sitting of Trans to glimpse and imbibe features and values of organization format of Sakhla Rigved Samhiya by its chase along the format of Sathapatya Measuring Rod.

SECTION –IV, MENTAL STATES

ASPECT 15, EXISTENCE WITH INHUMAN FRAME

1. Vedic systems chase existence phenomenon .
2. Chase of existence phenomenon is as of existence in its entirety.
3. This chase is of the features of existence with in frames and existence beyond frames.
4. The specific chase of Vedic systems is of existence with in human frame and existence beyond human frame.
5. Vedic systems blissfully reach at the conclusion that the existence values, format and its features of Universe is parallel to existence values, format and features with in human frames.
6. Chase of existence phenomenon with in human frames, as well as beyond human frames, by the Vedic systems is along the format of Sathapatya Measuring Rod.
7. The Sathapatya Measuring Rod is a synthetic set up of hyper cubes 1 to 6.
8. The synthetic set up of hyper cubes 1 to 6 is of the potentialities of exhaustive coverage of 6 space domain (Sun), as of expression values parallel to the format and values of our Solar universe..
9. Hyper cubes 1 to 6 accept domain boundary ratio for hyper cubes 1 to 6 being $A^n: 2nb^{n-1}$, $N= 1,2,3,4,5 \& 6$.
10. This leads to sequence range of boundary components of hyper cubes 1 to 6 being the values range parallel to (2,4,6,8,10,12) .
11. Scriptures preserve that human frame is of the format and values of Shud Chakras (6 circuits) of external characteristics of values range (2,4,6,8,10,12).
12. One may have a pause here and take note that these external characteristics values, and the values sequence of

boundary components are of hyper cubes 1 to 6 are of parallel values range (2,4,6,8,10,12).

13. One may have a pause here and permit the transcending mind to continuously remain in prolonged sitting of Trans and to glimpse and imbibe the values and virtues of above common values range for the Solar universe as well as of human frame set up.
14. One may further have a pause here and take note that $1+2+3+4+5+6=21$ is PARALLEL to the features of 21 branches of Rigved.
15. One may further have a pause here and take note that Ayurved is the Upved of Rigved Samhita.
16. It would be a very blissful enlightenment to glimpse the pure and applied values of Sakla Rigved Samhita and Chark Samhita.
17. The values of these two universal scriptures deserve to be imbibed fully.
18. These values shall be bringing us face to face with the “ Shareer Yantra”.
19. The Antah Karan is the set up of four folds namely Manas, Budhi, Chit, & Ahnkar.
20. These four folds ultimate supports of existence phenomenon within human frame, as such bring us face to face with the mental states.
21. The existence values differentiation for one from another is there because of the mental states at which the individuals are living.
22. The mental states are the potentialities index of the individuals.
23. These mental states, as such also may be taken as the mental blocks as each mental state is a set up of particular potentialities domain.
24. The manifestation and de-manifestation of mental states and transition from one mental state to another mental state are the aspects of which the Sadhakas have to be ever conscious.

25. Vedic systems chase of these features of mental states as well avails the format of Sathapatya Measuring Rod itself.
26. The mental states, as such are sequentially manifestation formats and their synthetic coordination as well is parallel to the synthetic coordination set up of hyper cubes of the set up of Sathapatya Measuring Rod itself.
27. This , that way, brings us face to face with the manifestation and de-manifestation of dimensional frames, as well as the sequential transition from given order dimensional frame to the next order dimensional frame.
28. This , this way, brings us face to face with the manifestation and de-manifestation of dimensional frames.
29. Further as to the transition from a given order dimensional frame in to next order dimensional frames.
30. Still further it also brings us face to face with the phenomenon of sequential coordination of the dimensional frames.
31. One may further have a pause here and permit the transcending mind to continuously remain in prolonged sitting of Trans and to be face to face with this phenomenon of coordination of dimensional frames, mental states and the Sathapatya Measuring Rod, all going to be parallel to each other.
32. One shall visit and revisit this parallel coordination phenomenon of dimensional frames, mental states and Sathapatya Measuring Rod formats.
33. With it , ultimate focus shifts to the transition from the dimensional domain of given space to the dimensional domain of the next space.
34. This, as such shall be bringing us face to face with the phenomenon of transition of the space content of given dimensional space to the space content of the next higher order dimensional space.
35. One may have a pause here and permit the transcending mind to continuously remain in prolonged sitting of Trans and to glimpse this phenomenon of sequential transition of

the dimensional spaces contents in a sequential way parallel to the sequential coordination of Sathapatya Measuring Rod itself.

36. One may have a pause here and permit the transcending mind to continuously remain in prolonged sitting of Trans to be face to face with the mental states as mental blocks being of the format and features of the framed domain folds of dimensional spaces.

SECTION –IV, MENTAL STATES

ASPECT 16, MENTAL STATES AND REAL SPACES.

1. Real spaces of the individuals are, as are their mental states.
2. Mental states go parallel to the cognizance restrictions upto and because of the dimensional frames framing and enveloping the space content lump as manifested domain.
3. One sitting in a room acquires mental state of cognizance limitation because of the walls (including floor and roof) .
4. This mental state goes parallel to a 3 space set up dominated by 3 space content manifesting as of domain fold enveloped with in a spatial boundary.
5. The melting of this mental condition would be visible, the moment one would be out of the room , as with it the obstructive spatial frame of walls of rooms will no more be there , and this freedom from the restrictive cause shall be leading to transition from the existing 3 space mental state to the next mental state.
6. One may have a pause here and permit the transcending mind to chase and re-chase this transition from the restrictive spatial boundary of room/cube/ hyper cube 3.
7. With the freedom from the restrictive spatial boundary , one like any other solid, will be blissfully acquiring a degree of freedom of motion, which shall be adding new dimension to the existing mental state of 3 space and thereby there would emerge a transition and attainment of 4 space existence.
8. This 4 space existence , like previous stage, 3 space existence by being confined to a room , room/cube/hyper cube 3 now shall be making it to be of the order of creative domain (4 space domain).
9. This is going to be of the format and features of one confining oneself with in hyper cube 4 .

10. One may have a pause here and take note that hyper cube 4 accept solid boundary .
11. With it , follow the restrictive feature of solid boundary.
12. The mental state because of restrictive solid boundary , as such shall be of the format and feature of the manifested domain fold of hyper cube 4 .
13. This is going to be of the features of 4 space content manifesting as domain fold of hyper cube 4 .
14. It is going to be a framed domain of solid boundary and to be with in a spatial order dimensional frame of quadruple dimensions.
15. One may have a pause here and permit the transcending mind to visit and revisit transition from mental state of format and features of 3 space content manifesting as framed domain fold of spatial boundary and to be with in a linear order dimensional frame of 3 dimension of 3 space to be mental state of the format and features of 4 space content manifesting as framed domain fold of solid boundary and to be with in a spatial order dimensional frame of quadruple spatial dimension.
16. One may have a pause here and permit the transcending mind to visit and revisit this transition phenomenon of the mental state of the format and features of 3 space domain to mental state of 4 space domain.
17. With perfection of the comprehension and imbibing of the values of this transition phenomenon from the mental state of 3 space restriction to be mental state of 4 space restriction, one may take a step further for attaining further transition from the existing 4 space content formatted mental state to the next 5 space content manifested state.
18. One may have a pause here and take note that 3 space content is designated as a physical content.
19. As such 3 space content manifests as physical domain.
20. The corresponding mental state , as such may be designated as a physical cognizance mental state.

21. A step ahead is lively a mental state of creative cognizance potentialities.
22. These creative cognizance potentialities of mental state are there parallel to the format and features of 4 space domain.
23. 4 space domain is designated as the creative domain.
24. The creative domain is a spatial order domain as 2 space plays the role of dimension of 4 space.
25. One may have a pause here and take note that 3 space is a linear order space, while 4 space is a spatial order space, as such physical mental state is a linear order cognizance mental state, while the creative mental state is of spatial order cognizance mental state.
26. A step ahead is a solid order cognizance mental state.
27. It is designated as transcendental mental state.
28. The transcendental mental state is of the format of transcendental domain (5 space).
29. Transcendental domain (5 space domain) is a solid order domain.
30. One may have a pause here and to sequentially glimpse the format, features, values and virtues of linear order cognizance mental state, spatial order cognizance mental state and solid order cognizance mental state.
31. A step ahead of physical mental state of linear order cognizance, creative mental state of spatial order cognizance and transcendental mental state of solid order cognizance, is there a self referral mental state of creative order cognizance.
32. One shall sit comfortably and permit the transcending mind to continuously remain in prolonged sitting of Trans and to glimpse and imbibe the values and virtues of creative order (4 space as dimensional order) cognizance mental state of self referral domain (6 space as domain) which is going to be of the order of the Solar Universe.
33. Vedic systems chase step ahead for attainment of unity state mental state.

34. Here the cognizance order is of unity state (7 space in the role of dimension of 9 space).
35. It is this attainment , with which , one shall be in a position to directly interact with nature (Asht Prakarti/8 space set up).
36. Simultaneously one shall be capable of interacting with Nav Braham (9 space) .
37. It is the attainment which is aspired and urged by the Sadhakas .
38. It is the most blissful state.
39. It is the enlightenment state.
40. One shall sit comfortably and permit the transcending mind to sequentially glimpse the transition phenomenon starting with physical mental state and sequentially reaching at creative mental state, transcendental mental state, self referral mental state and unity state mental state.
41. One may have a pause here and take note that this transition phenomenon would be parallel to the format of transcendence range (3 space, 4space, 5 space, 6 space and 7 space) .
42. It would be parallel to values transcendence range (3,4,5,6,7) with summation value $3+4+5+6+7=25$.
43. It would be blissful to tabulate formulations of transcendental code value 25.
44. Prithvi , Aushdhi, Vishnu are the formulations entries of this tabulation.
45. One shall enrich this tabulation.
46. One shall continuously endeavour for attainment of sequential mental states of higher and higher orders.

SECTION –IV, MENTAL STATES

ASPECT 17, CREATIVE MENTAL STATES

1. Creative mental state is of format and features parallel to that of creative domain (4 space domain).
2. 4 space domain is a spatial order domain (2 space in the role of dimension of 4 space).
3. The creative mental state, as such is of spatial dimensional order.
4. The cognizance order of creative mental state is of spatial order set up.
5. The spatial order set up is of different features and values than that of linear order set up.
6. It would be a blissful exercise to glimpse differentiation features of linear order set up and spatial order set u.
7. One way to comprehend the distinguishing feature of linear order set up and spatial order set up would be to comprehend and appreciate the distinguishing features and values of 3 dimensional frame of 3 linear axes set up than that of 4 space dimensional frame of 4 spatial dimensions.
8. One may have a pause here and take note that first distinguishing features as such would be that in case of 3 space, the dimensions are linear while in case of 4 space, the dimensions are spatial.
9. Further as that that the number of dimensions of 3 dimensional frame are three while number of dimension of 4 dimensional frame are 4.
10. One may have a pause here and take note that linear order, as such is making available the organization format of a line.
11. However, the spatial order set up provides organization format of a surface.
12. One may have a pause here and permit the transcending mind to glimpse and be face to face with the distinguishing feature of organization feature of a line from that of organization format of a surface.
13. As such the cognizance of physical mental state is going to be of the attainments parallel to the organization of line only.

14. However, the cognizance of creative mental state is going to be parallel to the organization format of the surface.
15. Such is the wide difference of cognizance spectrum of physical mental state from that of creative mental state.
16. Physical mental state being of a linear order , the same as such restricts cognizance only upto the format of hyper cube 3.
17. However, the cognizance coverage range of creative mental state is going to be of the format and values of hyper cube 4.
18. It is this wide range of differences that physical mental state individuals and creative mental state individuals make distinct classes for themselves.
19. For transition from the physical mental state to creative mental state, one shall transit from the format of hyper cube 3 and to reach the format of hyper cube 4.
20. Here it would be relevant to take note that 3 space plays the role of dimension of 5 space while 4 space plays the role of dimension of 6 space.
21. Likewise one can sequentially chase the roles of 3 space and 4 space respectively as dimension folds, boundary folds, domain folds, origin folds base folds and even as formats of base folds.
22. For perfection of creative mental state , one shall visit and revisit the creations during different roles of 4 space.
23. One may have a pause here and take note that Lord Brahma, creator of the Supreme, is the presiding deity of 4 space.
24. Lord Brahma is a four head Lord with a pair of eyes equipped in each of the quadruple heads.
25. This, as such will help us comprehend the expression range of creative cognizance mental state.
26. It is with creative cognizance mental state that one shall be working out 4 space Mathematic, Science and Technology.
27. Systems of 4space VMS&T are of creative cognizance format.

28. Sadhakas aspiring for the values of 4 space VMS&T shall aspire for attainment of creative cognizance mental state.
29. It is only with the creative cognizance mental state that one shall be working out the values of 4 space as a real 4 space.
30. The reality of 4 space is a real only for the individual who are of creative mental state.
31. All those who are not of creative mental state, cannot visualize the values and virtues of reality of 4 space.
32. As such Sadhakas aspiring for the values and virtues of the discipline of 4 space VMS&T shall first of all aspire and attain creative mental state, as it is only the creative mental state which can comprehend and imbibe the values and virtues of reality of 4 space.
33. Reality of 4 space is the lively reality but the same is beyond the cognizance potentialities of those who are only at physical mental state and have been victim of physical mental state blocking.
34. It is only with the melting of restrictiveness of physical mental blocking that one can aspire and attain creative cognition and it is only with the attainment of creative cognition that one shall be glimpsing and imbibing the values and virtues of 4 space reality.
35. One shall sit comfortably and permit the transcending mind to glimpse and imbibe the values and virtues of 4 space reality.

SECTION –IV, MENTAL STATES

ASPECT 18, TRANSCENDENTAL MENTAL STATE

1. Transcendental mental state is of values and virtues parallel to that of 5 space domain.
2. Reality of 5 space comes with in the cognizance range of transcendental mental state.
3. Transcendental cognizance state is a step ahead of creative mental state, which is parallel only to the formats , features and values of creative domain (4 space domain)
4. One may have a pause here and take note that 5 space plays the role of origin fold of hyper cube 4.
5. 5 space as origin of 4 space , will come with in the cognizance of Sadhakas who can transcend through the origin of 4 space itself.
6. The reality of 5 space for creative mental state individuals will be only of the feature of origin of 4 space being of repulsive feature reverting the cognizance progression and diverting it back to 4 space domain.
7. This way, one of the features of which the creative mental state individuals may become conscious would be as that the repulsiveness for the cognizance progression with in creative domain (4 space domain) is there because of its blocking by the transcendental domain.
8. However, for the Sadhakas to be free of this restrictive repulsiveness for cognizance progression, one is to transcend through creative domain (4 space domain) .
9. As such the cognizance of 5 space reality is straight a way linked with the transcendence from 4 space domain .
10. It is only by transcendence through manifested domain that one can reach at base of the origin of the manifested domain.
11. One may have a pause here and take note that origin of manifested domain is of a higher degree order than that of the domain itself.
12. One may have a pause here and take note that it is because of this feature of higher dimensional order of origin than that of domain that transcendence would be of the nature

of translation of the order of domain while it is riding and being carried by the higher order of the origin.

13. 5 space is a solid order space.
14. 4 space is a spatial order space.
15. The creative mental state is of format and features of a spatial order set up
16. The transcendental mental state is going to be of solid order set up.
17. One may have comprehensive view of the differentiating formats for transcendental domain and creative domain by having a comparative tabulation of the creations emerging while 4 space and 5 space are playing different roles.
18. 4 space as dimension fold creates 6 space domain while 5 space as dimension fold creates 7 space domain.
19. Further 4 space is the boundary fold of 5 space, while 5 space itself is the boundary fold of 6 space.
20. 4 space is the origin of 5 space while 5 space is the origin of 6 space.
21. 4 space as base of 3 space as origin of hyper cube 2 is of different structural format than that of 5 space as base of 4 space as origin of 3 space as domain.
22. One may have a pause here and take note that Lord Shiv, 5 head Lord is the presiding deity of 5 space.
23. Each of the 5 heads of Lord shiv is equipped with triple eyes.
24. 4 space is presided by Lord Brahma, 4 head Lord with each of quadruple eyes being equipped with a pair of eyes.
25. One may further have a pause here and permit the transcending mind to glimpse and to be face to face with the transcendence phenomenon of Lord Brahma, meditating with in his own cavity of heart upon transcendental Lord Shiv and with the grace of transcendental Lord, Lord Brahma multiplies 10 fold in Shivlok (5 space).
26. One may have a pause here and take note that Sadhakas aspiring for transcendence from creative 4 space domain to

- transcendental 5 space domain shall follow and transcend Lord Brahma way .
27. The reality of transcendental mental state is the reality of complete transcendence from manifested creative 4 space domain to transcendental 5 space domain.
 28. One shall sit comfortably and permit the transcending mind to go the Brahma way and to transcend and multiply.
 29. It is this virtue of transcending and multiplying which is unique in there in transcendental mental state .
 30. The creative mental state is of different values.
 31. The physical mental state is still of different features.
 32. The transcendental virtues, creative values and physical features are the characteristics in terms of which one may distinguish the cognizance ranges of physical mental state, creative mental state and transcendental mental state.
 33. Vedic systems reach at distinguishing feature of physical mental state, creative mental state and transcendental mental state in different ways and one of the ways is to chase along single axis, along pair of axis and then along triple axis.
 34. It may be a change 1 as 1 , 2 as 1 and 3 as 1 .
 35. It may be other way round as well as that 1 as 1 , 1 as 2 and 1 as 3 .
 36. Still the chase may be as (1), (1,2) and as (1,2,3).
 37. The transcendental domain as 5 space may be chased as number value 5 .
 38. It may be a chase as of triple steps parallel to triple values (1,3,5), designated as transcendence triple.
 39. This transcendence triple values (1,3,5) is parallel to transcendence triple spaces coordination of (1 space, 3 space, 5 space)
 40. This coordination is parallel to format and features of (1 space as dimension of dimension, 3 space as dimension and 5 space as domain.
 41. It is this reach from domain to dimension of dimension which deserves to be comprehended well and to be

thoroughly appreciated for its complete imbibing as the transcendence from domain fold is to be through origin fold and same is to reach upto the base fold.

42. It is this reach from domain fold to base fold through origin fold, which also would be attainable in reverse orientation as a reach from base fold to domain fold through origin fold.
43. One shall sit comfortably and permit the transcending mind to continuously remain in prolonged sitting of Trans and to perfect transcendental mental state

SECTION –IV, MENTAL STATES

ASPECT 19, SELF REFERRAL STATE

1. Self referral state is intelligent state of consciousness based intelligence.
2. Number 6 is the perfect number.
3. Further $6 = 1+2+3 = 1 \times 2 \times 3 = 2+2+2$.
4. Still further dimensional synthesis value of triple dimensions of any order is 6 i.e. $(N,N,N) = 6$.
5. These features make number value 6 to be uniquely unique.
6. Further as that $1+2+3 = 1 \times 2 \times 3 = 2 \times 3$ and $2+3 = 5$.
7. One may have a pause here and permit the transcending mind to continuously remain in prolonged sitting of Trans and to glimpse and imbibe the above values.
8. 4 space plays the role of dimensional 6 space.
9. $2+2 = 4$ and $3+3 = 6$.
10. However $2 \times 2 = 4$ and $3 \times 3 = 9$.
11. One may have a pause here and take note that 4 space has 9 geometries range.

12. Still further (6, 7,8,9) brings to focus the coordination of 6 space as dimension and 9 space as origin.
13. One may have a pause here and permit the transcending mind to continuously remain in prolonged sitting of Trans and to glimpse and imbibe the above values.
14. Sun has number value 6.
15. Sun is a six space body.
16. 6 space as domain accepts Sathapatya Measuring Rod synthesized by hyper cubes 1 to 6 .
17. 6 space domain accepts transcendence triple (2,4,6) / (2 space , 4 space, 6 space as of the format of (dimension of dimension, dimension, domain) .
18. One may have a pause here and take note that 3 dimensional frame permits split in to a pair of 3 dimensional frames of half dimensions of opposite orientation.
19. Numerals pair (3,6) in their Devnagri script constitute a reflection pair.
20. One may have a pause here and permit the transcending mind to continuously remain in prolonged sitting of Trans and to glimpse and imbibe the above values.
21. As 4 space plays the role of dimension and 4 space itself is of a spatial order space, as such 6 space becomes a uniquely different domain which permits transcendence from domain to dimension to dimension of dimension and still permit transcendence further and there is a reach to zero space.
22. On the other hand, 5 space domain permits transcendence triple (5,3,1) and in case of further transcendence there would be a reach from 1 to -1 which would mean reversal of progression.
23. In case of 5 space domain, there happens to be a reversal of progression while in case of 6 space there happens to be a reach at the zero value.
24. One may have a pause here and permit the transcending mind to continuously remain in prolonged sitting of Trans and to glimpse and imbibe the above values.

25. These distinguishing features of Self referral domain (6 space as domain) mix it a mental state and simultaneously makes it a consciousness state as the spatial order at dimension of dimension level, that way makes a choice of axes which is no more available for linear order.
26. It is this permissibility of choice of one out of two which is no more available for one out of one , which makes all the difference .
27. One may have a pause here and take note that this brings us face to face with the availability of choice for one out of two at the stage of dimension of dimension which as such is the choice at the stage of Kaaran Shareer (Casual body) .
28. It is this feature of the casual body which makes the mental state at this stage being not only an intelligence stage but also makes it a consciousness state.
29. One may have a pause here and permit the transcending mind to glimpse the values of pair of formulations namely: Jad and Chetan.
30. It would be a blissful exercise for the Sadhakas to distinguish between the Jad Tattav and Chetan Tattav.
31. It is this distinction which will help us comprehend and imbibe the values of Self referral state.

SECTION –IV, MENTAL STATES

ASPECT 20, UNITY STATE

1. Unity state is the existence state of unity state order (7 space in the role of dimension).
2. Number value 7 is the biggest numeral value of 9 numeral range of 10 place value system.
3. 3 space has 7 geometries range.
4. Parallel to it , there are 7 versions of cube.

5. All the 8 corner points of cube get coordinated sequentially arranged 7 edges of the cube.
6. 7 space accepts transcendental dimension order (5 space in the role of dimension) .
7. 7 space plays the role of origin of 6 space.
8. Number value of Polestar is 7 .
9. Hyper cube 7 accepts Self referral boundary of 14 components.
10. One shall sit comfortably and permit the transcending mind to glimpse above features of number value 7 and of unity state.
11. Unity state is the state of consciousness.
12. 6 space is the state of intelligence as well as consciousness.
13. 5 space is a state of intelligence of transcendental features.
14. 4 space is intelligence of creative features.
15. 3 space is intelligence only of physical features.
16. A reach from physical intelligence to consciousness state is a big reach aspired by the Sadhakas.
17. With attainment of unity state consciousness, there emerges unison of its own with Asht Prakarti and Nav Braham, and even with Par Braham.
18. It would be very blissful to chase four fold manifestation layer 7,8,9,10.
19. The summation value $7+8+9+10 = 34 = NVF (One)$.
20. One shall sit comfortably and permit the transcending mind to glimpse above features of number value 7 and of unity state.
21. One may have a pause here and take note that Divya Ganga flow emanates as 7 streams flow from the Bindu Sarovar .
22. It is this feature which deserves to be comprehended well and to be thoroughly appreciated for its complete imbibing to have its deep insight and enlightenment about the unity state.
23. One shall sit comfortably and permit the transcending mind to sequentially reach from linear order 3 space domain to transcendental order unity state domain.

24. Further one shall reach from transcendental order unity state to self referral order Asht Prakarti.
25. A step ahead one shall reach from unity order Brahaman domain.
26. Still further one shall aspire to reach Par Braham origin of unity state order.
27. It would be blissful to chase Divya Ganga flow through Bindu Sarovar as 7 stream flow reaching upto Ardhmatra component of sole syllable Om.
28. A step ahead there would be a reach upto Tripundam of linear order.
29. One may have a pause here and take note that unity state consciousness permits coordination at the physical format as coordination of Trishapta (3 and 7).
30. With it begins the enlightenment of Atharv Ved .
31. With it is initiated Sathapatya .

INDEX OF GANITA SUTRAS LESSONS 1 to 10

11. Text of Ganita Sutras and Upsutras
12. Ganita Sutra 1
13. Ganita Sutra 1 and Ganita Upsutra 1
14. Applied value of Ganita Sutra 1
15. Transition from Ganita Sutra 1 to Ganita Sutra 2
16. Ganita Sutra 2
17. Ganita sutra 2 and Ganita Upsutra 1
18. Transition from Ganita Sutra 2 to Ganita Sutra 3
19. Ganita Sutra 3 and Ganita Sutra 4
20. Source sutras and source upsutras

LESSON -1

TEXT OF GANITA SUTRAS AND UPSUTRAS

1. Text of Ganita Sutra includes Upsutra.
2. There are 16 sutras and 13 upsutras.
3. Sole syllable Om is the transcendental source reservoir of values, and the same is the prefix syllable of the text of Ganita Sutras and Ganita Upsutras.
4. Parnavaha the synonym of Om, is the end value reach of Ganita Sutras and Upsutras. Om to Parnavaha and back from Parnavaha is the cyclic order system of inner unfolding of the values of Ganita Sutra mathematics.
5. This makes processing system of Ganita Sutra being a cyclic system (chakra-vat).

गणित सूत्र *GANITA SUTRAS*

ॐ एकाधिकेन पूर्वेण। निखिलं नवतश्चरमं दशतः। ऊर्ध्वतिर्यग्भ्याम्
परावर्त्य योजयेत्। शून्यं साम्यसमुच्चये (आनुरूष्येद्ध) शून्यमन्यत्।
संकलनव्यकलनाभ्याम्। पूरणापूरणाभ्याम्। चलनकलनाभ्याम्।
यावदूनम्। व्यष्टिसमष्टिः। शेषाप्यङ्केन चरमेण। सोपान्त्यद्वयमन्तम्
एकन्यूनेन पूर्वेण। गुणितसमुच्चयः। गुणकसमुच्चयः। प्रणवः।

गणित उपसूत्र *GANITA UPSUTRA*

आनुरूष्येण। शिष्यते शेषसंज्ञः। आघमाघेनान्त्यमन्त्येन। केवलैः सप्तकं
गुण्यात्। वेष्टनम्। यावदूनं तावदूनम्। यावदूनं तावदूनीकृत्य वर्गं च
योजयेत्। अन्त्ययोर्दशकेऽपि। अन्त्ययोरेव। समुच्चयगुणितः।
लोपनस्थपनाभ्याम्। विलोकनम्। गुणितसमुच्चयः समुच्चयगुणितः। प्रणवः।



LESSON 2

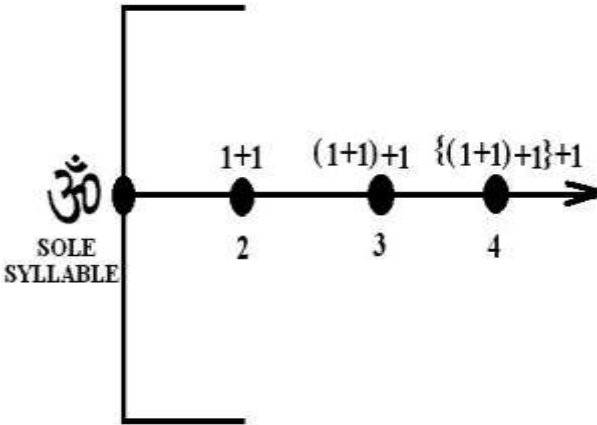
GANITA SUTRA-1

एकाधिकेन पूर्वेण

Ekadhikēn Purvena

One More than One before

SN	1	2	3	4	5	6	7	8	9
Letter	ए	क्	आ	ध्	ठ	क्	ए	न्	ट
TCV	6	1	2	7	2	1	6	8	1
SN	10	11	12	13	14	15	16		
Letter	प्	ड	र्	व्	ए	ण्	ट		
TCV	5	6	3	7	6	7	1		



1 TRANSCENDENTAL SOURCE

1. Sole syllable om is the Transcendental source of Vedic knowledge. This provides transcendental base for the knowledge and systems of Ganita Sutras
2. Tasya wachaka Pranvaha (om, Thy Synonym Parnavaha) is the end reach value reservoir of Vedic knowledge, and as such pravnava is the end reach value of Ganita Sutras.

2 RECITE AND RE-VISIT THE TEXT

1. Recite the text of Ganita Sutra 1.
2. Revisit the above letter wise tabulation of the text of Ganita Sutra 1, as a sequential arrangement of composition of sixteen letters text of Ganita Sutra 1.
3. One shall focus upon the working rule of Ganita Sutra 1 as of value: 'one more than before'.

3 ARITHMETIC BEGINNING

1. Value '1' is the initiation value.
2. $[1, 1+1=2, (1+1)+1 = 3, \dots]$ is the initial arithmetic reach.
3. This reach is designated as a 'Counting Reach'.
4. This is a Reach, as a Reach of Counting steps.
5. The first step is '1', itself and same is designated as the first count.
6. '1' as first count, '2' as the second count, '3' as the third count, and so on is available a series of counts.

4 ALGEBRA

Ganita Sutra 1 leads to Initiation value of algebra as:

$X^1, X^2, X^3, X^4, \dots$

5 GEOMETRY

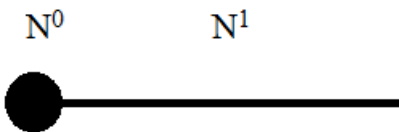
Ganita Sutra 1 leads to initiation value of geometry as:
Line (length, surface (area / length and breadth), solid (volume / length, breadth and height), hyper solid (hyper volume / length, breadth, height and hyper dimension).

6 UNIFIED FORMAT

Ganita Sutras simultaneously workout, arithmetic, algebra, geometry, other values of mathematics. It is designated a unified format approach of Ganita Sutras.

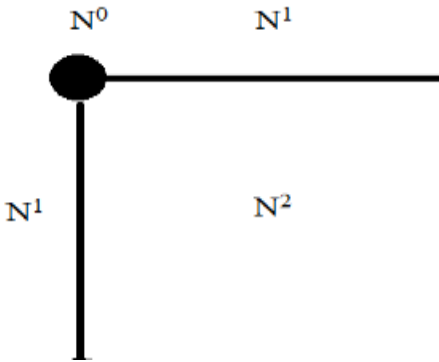
7 ILLUSTRATION

1. Half closed interval (interval with only one end point intact) format is the illustrative case of unified format, as the structure of this half closed interval permits expression as N^1+N^0 , and this makes arithmetic value $(N+1)$, and the same also makes a first degree equation format as $(X+1)^1$.

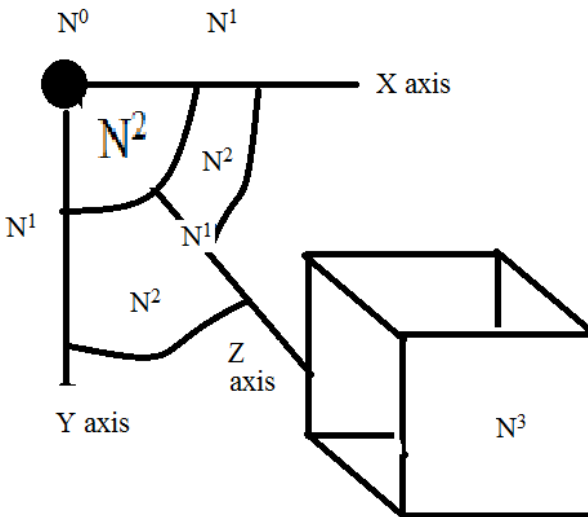


2. A step ahead, a pair of half closed intervals as a pair of axes will make a format for $(N+1)^2$, as well as for $(X+1)^2$

= x^2+2x+1 and still further it will make a geometric set up for a surface with in a two dimensional frames of a pair of axes, each axis, as being half closed interval.



3. A step further a head, triple half closed interval as a three dimensional frame will lead to a unified format for number value $(N+1)^3$, algebraic value $(x+1)^3 = x^3 + 3x^2+3x+1$, and for structural set up of a solid within a three dimensional frame of axes of the format of half close interval.

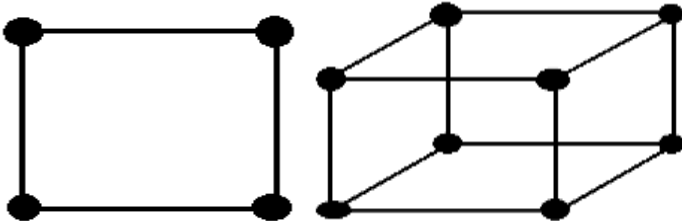


4. One shall revisit the feature of above illustrative case of a unified format of half closed interval.

5. These organization features will further bring us face to face with the calculus values coordinating $(X^3, 3X^2)$, $(X^2, 2X^1)$ and $(X^1, 1X^0)$.
6. Now let us shift from the format of an half open interval to format of close interval.



7. An interval with its both end points intact is designated as close interval.
8. A closed interval of length N permits expression as $N^0+N^1+N^0$.
9. The expression of closed interval as $(N^1+2N^0) = N+2$ will help us appreciate the parallel algebraic and arithmetic formats of algebraic expression $(X+2)^1$ and of parallel arithmetic value $X = N$.
10. The algebraic equation $(x+2)^2$ and $(x+2)^3$ will lead us to parallel geometric formats of square and cube respectively and still further, the same shall be bringing us face to face with arithmetic value $(N+2)^2 = N^2+4N+4$, and $(N+2)^3 = N^3+6N^2+12N+8$.



11. It would be a blissful exercise to comprehend imbibe the values and features of unification format for arithmetic's, algebra and geometry of the format of closed interval.
12. A step ahead we can glimpse the unification format of the synthetic set up of a closed interval and half open interval.

13. It shall be leading to a set up of structural components of triple points (a pair of end point and a middle point), and a pair of length portion on the either side of the middle point up-till the reach of respective end points.
14. This will permits expression as $N^0 + N^1 + N^0 + N^1 + N^0 = 2N^1 + 3N^0 = 2N + 3$.
15. Chase triple expression $(2N+3)^1$, $(2N+3)^2$ and $(2N+3)^3$.
16. It would be a blissful exercise to take note that interval as of 2 parts, square as of 4 parts and cube as of 8 parts shall be accepting respective structural components set ups parallel to the expansion of above triple expression namely $(2N+3)^1$, $(2N+3)^2$ and $(2N+3)^3$.
17. One shall visit and revisit the above illustrative applications of the working rule 'one more than before' of Ganita Sutra 1 and to acquire proper insight and appropriate enlightenment about the basis base values of the working rule 'one more than before'.



LESSON-3

GANITA SUTRA 1 AND GANITA UPSUTRA 1

GANITA SUTRA-1

एकाधिकेन पूर्वेण

Ekadhikēn Purvena

One More than One before

GANITA UPSUTRA – 1

आनुसूप्ये

Anurupyena.

Proportionately

GANITA SUTRAS

1. Ganita Sutras are basis base of Vedic Mathematics.
2. Ganita Sutras include Ganita Upsutras the complete text of Ganita Sutra is of sixteen Ganita Sutras and thirteen Ganita Upsutras. This text is reproduced in appendix-1 of this book. Ganita Sutras text is in Devnagri script.
3. The text of Ganita Sutras (and Ganita Upsutras) avails 519 letters. Of these only 36 are the independent letters. With only a few recitations, one can memories this text. And, once the text stands memories, than there would, no more remain, dependence upon the return text, and the entire exercise of Mathematics, would simply become a ‘mental exercise’. This is the reason why Vedic Mathematics is designated as ‘Mental’ Mathematics.
4. First feature of Ganita Sutra text is that it sequentially unfolds from within.

GANITA SUTRA-1

एकाधिकेन पूर्वेण

Ekadhiken Purvena

One More than One before

SN	1	2	3	4	5	6	7	8	9
----	---	---	---	---	---	---	---	---	---

Letter	ए	क्	ट	ध्	ठ	क्	ए	न्	ट
TCV	6	1	2	7	2	1	6	8	1
SN	10	11	12	13	14	15	16		
Letter	प्	ड	र्	व्	ए	प्	ट		
TCV	5	6	3	7	6	7	1		

- Ganita Sutra 1 is the source sutra. Text of Ganita Sutra 1 is a composition of 16 letters. The organization of these 16 letters is as of a sequential range of 16 steps. The working rule of Ganita Sutra 1 is 'one more than before'. The text of Ganita Sutra 1 itself is as well organized as per its own rule of sequential organization 'one more than before'. Further the organization of Ganita Sutras 1 to 16 as well is of organization availing the working rule of Ganita Sutra 1 being 'one more than before'.
- The range of values 1 to 16, as 16 steps parallel to 16 points along an interval, with fixation of the interval by triple points, (pair of end points, and the middle point) will make remaining organization as of thirteen points (steps), which will leads us to the organization format of thirteen.

GANITA UPSUTRA – 1

आनुरूप्येण

Anurupyena.

Proportionately

SN	1	2	3	4	5	6	7	8	9	10
Letter	आ	न्	ड	र्	ऊ	प्	य्	ए	ण्	अ
TCV	2	8	3	3	6	5	1	6	7	1

7. Ganita Upsutras, with Ganita Upsutra 1 being the source upsutra, the text of Ganita Sutra 1 is a composition of ten letters. The working rule of Ganita Upsutra 1 is 'Proportionately / symmetrical / follow the form as it is framed'. The sequential organization of the text of Ganita Upsutra 1 as well is as per the working rule of Ganita Upsutra itself being 'Proportionately / symmetrical / follow the form as it is framed'.
8. The working rule of Ganita Sutra 1: 'one more than before' along the interval as organization of 16 points, with 3 points preserved for fixation of the interval itself, when approach in terms of the working rule of Ganita Upsutra 1: 'Proportionately / symmetrical / follow the form as it is framed', the same shall be providing 3 additional points for the text range of ten letters (as ten points), and there by the organization range format of Ganita Upsutra 1 will emerges as thirteen points range format.
9. Ganita Sutra 1 and Ganita Upsutra 1, as such are the source values working rules of basis base of mathematics.
10. One shall sit comfortably and to permit the mind to fully comprehend the values and working rules of Ganita Sutra 1 and Ganita Upsutra 1.

**LET US REVISIT THE RULES OF GANITA SUTRA 1
AND GANITA UPSUTRA 1**

1. Ganita Sutra '1' means literally means 'one more than before'. And, Ganita Upsutra '1' literally means 'to follow the form as it is'.
2. It leads to the rule of proportionately'. Also, it takes to the rule of 'symmetry'.
3. As such, Ganita Sutra 1 and Ganita Upsutra 1, together focus upon 'sequential order'.
4. In terms of such sequential ordering, one may beginning with the linear order of a line, at next step can reach at the spatial ordering of a plane.
5. And, a step ahead there would be a reach at ordering of solid format of 3-space bodies.
6. The sequential reach will continue ahead.
7. With it, the pure and applied value of working rules of Ganita Sutra 1 and Ganita Upsutra 1, individually and collectively makes a very rich mathematical domain.
8. Illustratively, beginning with number value '1', one may, a step by step, by the rule of Ganita Sutra 1 can reach at the set of counting numbers (1, 2, 3, 4 ...).
9. Also, by beginning with values 1^1 , one may reach at the power set ($1^1, 1^2, 1^3 \dots$).
10. Also by beginning with (1x1), one may reach at (1x1, 1x2, 1x3, 1x4 ...).
11. Like that, a series of, different sequential values ranges, can be reach at an imaged by the working rule of Ganita Sutra 1 and Ganita Upsutra 1.
12. Still further, there can be reach at the sequence of (1-space, 2-space, 3-space, 4-space ...).
13. Corresponding reach can be at (interval, square, cube, and hyper cubes 4, 5, 6 ...).
14. Likewise, can be had a reach at (1, 1+2, 1+2+3, 1+2+3+4 ...).

15. Parallel to it, there would be a reach at the sequence of set $[(1), (1, 2), (1, 2, 3), (1, 2, 3, 4), \dots]$.
16. Likewise, can be had a reach at $[(1, 2, 3, 4), (2, 3, 4, 5), (3, 4, 5, 6), (4, 5, 6, 7) \dots]$.
17. Still further there would be a reach at single variable, double variables, triple variables, quadruples variables ...).
18. Also, can be had a reach at the sequence of first degree equation of single variable, second degree equation of single variable, third degree equation of single variable, fourth degree equation of single variable ...).
19. Polygons sequence, leads, dimensional frame, mile stone along a role, and the like there is going to be a very colorful spectrum of sequences, series and sequences of series, as well as series of equations whose chase can be managed by working rules of Ganita Sutra 1 and Ganita Upsutra 1.
20. The sequence of sequences settles mathematical system which inherently takes us from the format of organization of a linear order of a line to the format of the organization of the surface.
21. This as such, makes spatial format of a square, as the basic organization format.
22. One may have a pause here and take note that the text of Ganita Sutra and upsutras is having word formulation 'varga' as the basic formulation.
23. Out of the whole range of geometric format, the choice and option for the formulation 'varga' by the text of Ganita Sutra and upsutra, in itself settle the prominent role which format of varga is to plain in the Vedic mathematics systems.



LESSON -4

APPLIED VALUES OF GANITA SUTRA 1

1. 'One more than before' Rule, of Ganita Sutra 1 is the 'pure value'.
2. The applied value of this pure value is the manifestation of this value as a 'sequential order', which becomes the format for organizing entities by associating with them 'counts', as first, second, third etc. and them having their arrangement parallel to the counting number lines (1, 2, 3, 4, ...).
3. Arithmetic, algebra, geometry, all other branches of mathematics are very heavily availing for sequential order format of counting numbers lines.
4. Here are being mentioned the prominent illustrative cases:
 - (i) Counting numbers lines itself is the first illustrative availing of the sequential order format.
 - (ii) Sequence of units of line, surface, solid and hyper solids being ($1^1, 1^2, 1^3, 1^4, \dots$) is availing sequential order format variable spectrum (single variable, pair of variable, triple variable, quadruple variables, penta variable, ...) is the organization arrangement availing sequential order format of counting numbers lines.
 - (iii) [Point, line, angle, tri-angle, square, pentagon, hexagon, ...] is the organization arrangement of

the format of sequential order of counting numbers lines.

- (iv) Milestones along the road, house number along a street, whole numbers of the student of class, time tables and pages of a book, all like that avails the sequential order of the counting numbers formats.
 - (v) Punctuation of a Time line can be had for a specific use as per the punctuation of the counting number lines.
 - (vi) Grids, matrixs, determinants, equations and the like accepting cardinality association as well avail sequential order format of counting numbers lines.
 - (vii) Set up points, set up lines, set up surfaces, set up solid, set up hyper solids as well accepts arrangement availing sequential order format of counting number lines.
 - (viii) Infinite sequence of infinite sequences as well permit chase in terms of sequential order of counting numbers line format.
 - (ix) Life spines of time line measure permit chase along counting numbers line format.
5. One shall glimpse applications of working rule of Ganita Sutra 1 in the practical life situation.
 6. One shall glimpse the growth of plants, motions of bodies, structural arrangement and happening all around and to acquire insight about the applied values, as well as enlightenment about the pure values of Ganita Sutra 1.
 7. One may avail the value of Ganita Sutra 1 for organizing one's life.
 8. One may process step by step with every step being of a progressive value more than that of the previous step.

9. The work assignment may be phased for one step at a time and second step being interlinked with the first step, third step to be interlinked the second step, and so on.
10. The work force component to be organized such that each component remains integrated with all other components.



LESSON -5

TRANSITION FROM GANITA SUTRA 1 TO GANITA SUTRA 2

1. Counting number line is an infinite counts lines.
2. This organization format of counting number lines, being of infinite steps, as such, is of infinite accommodation potentiality, but, as it is, this format is not handy enough as the same being infinite, the same transcends all finite formats.
3. The Ganita Sutra 2, provides, finite formats, infinitely many, like availability of infinite number of counts, but with a difference that counts are like points while finite format are like units of intervals.
4. It is this shift, from points to units, which makes a qualitative difference of working along the infinite line of Ganita Sutra 1, to finite line format of Ganita Sutra 2.
5. As such, the transition from the set up of a infinite line to the set up of a (finite length line) interval, is going to be transition form the mathematics of Ganita Sutra 1 to mathematics of Ganita Sutra 2.

6. This transition from infinite line format of Ganita Sutra 1, to finite line format of Ganita Sutra 2, can be appreciated well with the help of the working rule of Ganita Upsutra 1 **आनुरूप्ये** Anurupyena., which literally means, 'to follow the form as it is framed'.
7. This working rule of Ganita Upsutra 1, 'to follow the form as it is framed', as it leads to symmetry of forms, and the propsoanilty rule form number values chase.
8. Units (of length, are of surfaces, solid etc), as per the symmetry rule of Ganita Sutra 1, may be chased like counting numbers lines, working rule of Ganita Sutra 1.
9. One may have a pause here and take note that line, how so ever small it may be , the same accommodates infinite number of points.
10. As such, all lines, of any length, even may be finite are infinite, the same from the point of view of points remain of equal cardinality, parallel to that of entire counting numbers lines.
11. This, that way, when whole of the counting number line, is to be taken as a single count, the same will leads us to points as 'one line'.
12. One may have a pause here and have a fresh look at the formulation 'point' which gives $NVF (POINT) = 74 = NVF (ONE LINE)$.
13. It is this feature which deserves to be comprehended well for its full appreciation to have its complete imbibing for acquiring proper insight and for attaining appropriate enlightenment of transition from counting points to counting units.
14. It is this insight and enlightenment of transition from points to intervals, that one shall be properly approaching with requisit mental state for

comprehension and imbibing of the mathematics of Ganita Sutra 2 'all from nine, and last from ten' which avails the format of ten place value system of nine numerals range.

15. The symmetry of Ganita Upsutra 1 will parallel take to whole range of place value system.
16. As such, the gap between two points as an interval will provide the transition reach bases for from Ganita Sutra 1 to Ganita Sutra 2.



LESSON-6

GANITA SUTRA 2

निखिलं नवतश्चरमं दशतः

Nikhilam Navatasaramam Dasatab.

All from 9 and the last from ten

1. Working rule of Ganita Sutra 1: 'one more than before' structures construction of sequential range of number of count, as large, as may be desired.
2. Parallel to it, their results a construction of a line as big as would be desired.
3. This as such, leads to infinitely long line to accommodate whole range of counts range, of steps, as large in numbers, as may be desired.
4. Ganita Sutra 2 with its working rule: 'all from 9 and last from 10', leads to construction of ten place value system for chase of all the counts.

5. It is this attainment of transition from the mathematics of Ganita Sutra 1 to mathematics of Ganita Sutra 2 which deserves to be imbibed.
6. Basis base value of mathematics of Ganita Sutra 1 is the principle of sequential ordering of the objects / elements, and of steps of chase.
7. Basis base value of mathematics of Ganita Sutra 2 is the organization in terms of nine steps (numerals) of ten place value system.
8. Working rule of Ganita Sutra 1: 'one more than before', as such, will make a mathematics of single digit counts, and a step ahead will make mathematics of Ganita Sutra 2, as a mathematics of double digit counts. And a step ahead mathematics of Ganita Sutra 3 will become a mathematics of triple digit numbers.
9. Further, a working rule of Ganita Sutra 1 'one more than before' will sequentially begin with its first letter, namely a sixth vowel, and at the next step, it will reach at the second letter, namely the first Varga consonant (ऋ).
10. Scriptures enlighten us as 'Ka Brahma'.
11. Brahma, is a four head lord.
12. With it, the first letter of the text of Ganita Sutra 1, namely sixth vowel gets associated with number six.
13. A step ahead, the second letter of the text of Ganita Sutra 1, gets associated with number four.
14. Accordingly first pair of letters of text of Ganita Sutra 1 get associated with a pair of numbers (6, 4).
15. The symmetry rule of Ganita Upsutra 1 will take us from the pair of numbers (6, 4) to a pair of numbers (N+2, N) for all values of N.
16. Now, nine numerals range of ten place value system, that way will take us to a pair of numbers (9+2, 9).

17. It would be blissful to take note that all digit numbers 01 to 99 of ten place value system, get accommodated by 9x11 grid / matrix as under:

01	02	03	04	05	06	07	08	09
10	11	12	13	14	15	16	17	18
19	20	21	22	23	24	25	26	27
28	29	30	31	32	33	34	35	36
37	38	39	40	41	42	43	44	45
46	47	48	49	50	51	52	53	54
55	56	57	58	59	60	61	62	63
64	65	66	67	68	69	70	71	72
73	74	75	76	77	78	79	80	81
82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99

18. It would be blissful to take note that above organization format of double digit numbers of ten place value systems permits split into 2 parts, firstly as numbers of the upper part including the numbers of the numbers line (10, 20, 30, 40, 50, 60, 70, 80, 90).
19. The second part of above organization format consists of number below the numbers line (10, 20, 30, 40, 50, 60, 70, 80, 90).

20. It would further be blissful to take note that the upper part has numbers line 11, 22, 33, 44, as a mirror line.
21. Likewise the lower part as a mirror line 55, 66, 77, 88, 99.
22. It would further be blissful to take note, both the upper part and lower part, organize numbers as reflection pairs of numbers like (01, 10), (02, 20), (03, 30),
23. The mirror line of upper part (11, 22, 33, 44) as such makes these quadruple self reflecting artifices.
24. Further nine reflection pairs (01, 10), (02, 20), (03, 30), (04, 40), (05, 50), (06, 60), (07, 70), (08, 80), (09, 90) are availing 'zero', as a one of the digit.
25. The above quadruple self reflecting artifices / number namely (11, 22, 33, 44) together with above nine reflection pair availing zero as one of the digit, together make a set of $4+9 = 13$ reflection pairs.
26. The remaining reflection pairs of upper part are 16.
27. It would be a blissful exercise to tabulate 16 reflection pair of the upper part of which 'zero is not marking its presence as one of the digits'.
28. It would be blissful to take note that there are 16 sutras and 13 upsutras.
29. It would further be blissful to take note that it artifice 29 is structurally very rich as that the transcendental code value of formulation Brahma is 29.
30. It would further be blissful to take note that the prime range of number range 1 to 29 is (2, 3, 5, 7, 11, 13, 17, 19, 23, 29).
31. It would be blissful to take note that the prime range of numbers 1 to 29 is of ten primes.
32. As such, the mathematics of Ganita Sutras is of the feature of mathematics of ten primes.
33. The ordinary mathematics is of ten numbers (1 to 10) while mathematics of Ganita Sutras is of ten primes (2,

- 3, 5, 7, 11, 13, 17, 19, 23, 29) which takes us uptill number range 1 to 29, and as number 30 is a composite number, as such the coverage range extends as 1 to 30.
34. It would further be blissful to take note that the volume of the cube is sustained by a structural set up of 29 components of cube, namely (8 corner points, 12 edges, 6 surface, 3 axes, 1 origin).
35. One shall sit comfortably and to permit the mind to fully comprehend the above features and values of Ganita Sutras mathematics.
36. One shall fully imbibe the above features and values to have its complete appreciation for proper insight and appropriate enlightenment about the mathematics of Ganita Sutras.



7

GANITA SUTRA 2 & GANITA UPSUTRA 1

GANITA SUTRA-2

निखिलं नवतश्चरमं दशतः

Nikhilam Navataschramam Dasatab.

All from 9 and the last from ten

GANITA UPSUTRA – 1

आनुरूप्येण

Anurupyena.

Proportionately

1. Ganita Sutra 2 with its working rule: ‘All from nine and last from ten’. And Ganita Upsutra 1, with its working rule: ‘Proportionately / symmetrical / follow the form as it is framed’, make a mathematics of ‘**All Place Value System**’.
2. The organization format features of place value system, as such come to be as that double digit numbers of ten place value system get accommodated by the $N \times (N+2)$ grid / matrix.
3. Illustratively, double digit numbers of six place value system will be accommodated by 5×7 grid, as under:-

01	02	03	04	05
10	11	12	13	14
15	20	21	22	23
24	25	30	31	32
33	34	35	40	41
42	43	44	45	50
51	52	53	54	55

4. It would be blissful exercise to chase split of above organization format into upper part including number line (10, 20, 30, 40, 50) and the lower part below this numbers.
5. It would further be blissful to chase reflection pairing of numbers of the upper part along the mirror line (11, 22) still further,

6. It would also be blissful to chase reflection pairing of number of the lower part along the mirror line (33, 44, 55).
7. Working rules of Ganita Sutra 1, Ganita Upsutra 1 and Ganita Sutra 2, together help us reach at the common polynomial format for chase of numbers along place value systems, as under
 $AX^0 + BX^1 + CX^2 + \dots$).
8. For $X = 10$ and numerals range (1, 2, 3, 4, 5, 6, 7, 8, 9) will help work out numbers along ten place value system on the above polynomial format.
9. Likewise $X = 6$ and numerals range (1, 2, 3, 4, 5) will help us chase numbers along six place value system on the above polynomial format
10. Likewise all others place value system can be worked out values of number all above polynomial format.
11. It will make a blissful exercise to convert value of number of ten place value system into six place value system, and also the other way around likewise one may reach from a given place value system into another require place value system.



LESSON -8

TRANSITION FROM GANITA SUTRA 2 TO GANITA SUTRA 3

1. Let us recapitulate the transition from Ganita Sutra 1 to Ganita Sutra 2.

2. Ganita Sutra 1 manifests applied value for its pure value as a reach from one more than before' to a sequential order format of counting numbers lines.
3. This has been a format of 'counts / points / single digit numbers'.
4. The transition from Ganita Sutra 1 to Ganita Sutra 2 has attained a transition from counting numbers line, to counting units surface of a pair of axes frame accommodating values of double digit numbers.
5. One may have a pause here and take note that the infinite counts 'counting numbers line', gets folded as a place value system folds.
6. With folds there happens to be a superimposition of formats, as a result of which there happens to be the emergence of compactified set ups (of folds) of place value systems format.
7. The transition from Ganita Sutra 2 to Ganita Sutra 3 is the format and features of 'unfolding' values.
8. The counting number line of format of Ganita Sutra 1 transition and transforming into a spatial format, as a step ahead, takes to a shift from horizontal plane format into a vertical plane format.
9. This shift from the horizontal plane format to vertical plane format, in the process acquires additional features of halving value.
10. One may have a pause here and take note that the folding reach being because of a single axis to double axes reach, the same while to be of reversal of the folding process will result into reverse of double being 'half'.
11. The working rule 'vertically and crosswise', will take inside the surface of the vertical plane.

12. It is this feature, for whose attainment , one is to be of a mental state of transition of working with double digit numbers values accepting a split at the middle and making the organization as to be of a pair of parts.
13. It is the visualation of a number value, accepting its fractions, by the working format of Ganita Sutra 3, which that way makes mathematics of Ganita Sutra 3 being a very rich mathematical domain, the mathematics of powers and roots permitting chase along the same format permitting processing steps from left as well as from the right set ups of double multiples digit number are the features of mathematics of Ganita Sutra 3, which deserves to be glimpse and imbibed thoroughly to have a bliss of mental features of Vedic mathematics.
14. The algebraic format for arithmetic operations supplied by Ganita Sutra 2, takes a step ahead, here by Ganita Sutra 3 providing geometric format for the algebra and arithmetic.
15. One shall the sit comfortably and permit the mind to thoroughly glimpse and fully imbibe these values and features of sequential transition from Ganita Sutra 1 to Ganita Sutra 2 and further Ganita Sutra 2 to Ganita Sutra 3.



LESSON-9

GANITA SUTRA 3 AND GANITA SUTRA 4

GANITA SUTRA-3

ऊर्ध्वतिर्यग्याम्

Urdhva tiryagbhyam.

Vertically and crosswise

SN	1	2	3	4	5	6	7	8	9	10
Letter	ऊ	घ	र्	व्	अ	त्	इ	र्	य्	अ
TCV	6	7	2	7	1	4	2	2	1	1
SN	11	12	13	14	15					
Letter	ग्	भ्	य्	टा	म्					
TCV	3	8	1	2	9					

GANITA SUTRA 4

परावर्त्य योजयेत्

Paravartya Yojayet.

Transpose and Apply

SN	1	2	3	4	5	6	7	8	9	10
Letter	प्	अ	र्	टा	व्	ट	र्	त्	य्	ट
TCV	5	1	3	2	7	1	3	4	1	1
SN	11	12	13	14	15	16	17			
Letter	य्	ओ	ज्	अ	य्	ए	त्			

TCV	1	7	4	1	1	6	4			
-----	---	---	---	---	---	---	---	--	--	--

1. Ganita Sutra 3 is the third sutra.
2. Sequentially Ganita Sutra 1, 2 and 3 will accept sequential value triple (1, 2, 3).
3. Ganita Sutras 1, 2, 3 will also have sequential association of values of mathematics of single, double and triple digit respectively.
4. This will further take us to sequential progression of sequential triples, like:
 - (i) (1, 2, 3)
 - (ii) (single axis, double axis, triple axis)
 - (iii) (first axis, second axis, third axis)
5. The availability of symmetry rule of Ganita Upsutra 1, will help us have a reach from the sequential arrangement along a line to that of an arrangement along the circumference of a circle, where by the sequential triple (1, 2, 3) will help us have an arrangement of progression as (2, 3, 1), as well.
6. The sequential reach for the formats of Ganita Sutra 1, 2, and 3 will also bring us face to face with a single point fixation of a line, double points fixation of a line and triple points fixation of a line.
7. It will also further bring us face to face with the triple point fixation of a line with first step being the first end point as a starting point and, second point being the reach at the second end point, and finally the third point to take us the middle point.
8. These features, as such, will bring us face to face with the sequential mathematical reach, in the order of Ganita Sutra 1, 2, 3.

9. The first letter of the text of Ganita Sutra 1 being the sixth vowel has an association of number value six. The letter of the text of Ganita Sutra 1 namely in the first consonant has first association of number value four. And a step ahead, the third letter of the text of Ganita Sutra 1, being the elongated first vowel, the same as an association of number value 2.
10. Let us have a pause here and take note that the emerging values sequence (6, 4, 2), as such, bring us face to face with many features, like:
 - (i) (6, 4, 2) is of opposite orientation of value triples (2, 4, 6).
 - (ii) Value triples (2, 4, 6) is parallel to value triple (1, 2, 3).
 - (iii) Further the difference value (6, 4) is equal to the difference value (4-2).
 - (iv) Still further, the above differences values, in their generality, is of the format $[(N+2)-(N)]$.
 - (v) It is parallel to 1-space as dimension (axis) of 3-space (domain).
 - (vi) The triple (1, 3, 5) will take us firstly from 1-space as dimension to 3-space as domain, and secondly from 3-space as dimension to 5-space as domain.
11. Let us have a fresh look at the set up of half open interval, as a set up of a point and a line.
12. The close interval is of a set up of (point, line, point).
13. Further triple point fixation of a line will lead us to (point, line, point, line, point).
14. This set up will help us have an organization of:
 - (i) Half close interval and of
 - (ii) Half open interval
15. Let us have a fresh visit to the above features and we can comprehend as that at first step we are having a set up of

- an half open interval. At second step the reach is at closed interval. And third step, the reach is at a synthetic set up of a close interval and of a half open interval.
16. The above synthetic set up, with it split, will also help us reach at the organization has of a square, as a dynamic state format of a closed interval, which shall be making the middle point to pass through the centre of the square, and the third axis through the centre of the square will make a set up of half cube above the first phase of the square surface and second half of the cube, being towards the other phase of the square surface.
 17. The sequential step also will take us, at the first steps as horizontal line progression, and the same at the second step leading to horizontal plane set up, and finally at the third step there can be reach as a vertical plane set up.
 18. Still further, the triple steps progression may be at the first step being '1 as 1', and at second step being '2 as 1 and 1 as 2', leading to $\frac{1}{2}$ as a working unit. And next there can be reach at $\frac{1}{4}$ as a working unit.
 19. One may have a pause here and take note that the vertical plane with its first part above the first phase of the square surface base, when splits into two parts, the same shall be making quarter square format for the working organization, and the same is available for the working rule of Ganita Sutra 3: 'vertically and crosswise'.
 20. It would be blissful to glimpse and imbibe the above features and values of the organization and format of Ganita Sutra 3.
 21. It would also be blissful to glimpse and imbibe the transition values for a reach at the organization format of Ganita Sutra 4 'transpose and apply to unite', by having a reach from the format of half part of the half square of

Ganita Sutra 3 to reach at the second half of the half square.

22. One shall sit comfortably and to permit the mind to fully comprehend and to completely imbibe the above features and values of organization format of the working rule of Ganita Sutras 1, 2, 3 and 4.



LESSON-10 SOURCE SUTRA AND SOURCE UPSUTRA

1. Ganita Sutra 1 (Ekadhikena Purvena) is the source sutra and Ganita Upsutra 1 (Anurupyena) is the source upsutra.

Ganita Sutra-1 एकाधिकेन पूर्वेण

SN	1	2	3	4	5	6	7	8	9
Letter	ए	क्	आ	ध्	ठ	क्	ए	न्	ट
TCV	6	1	2	7	2	1	6	8	1
SN	10	11	12	13	14	15	16		
Letter	प्	उ	र्	व्	ए	ण्	अ		
TCV	5	6	3	7	6	7	1		

Upsutra – 1 आनुरूप्ये

SN	1	2	3	4	5	6	7	8	9	10
----	---	---	---	---	---	---	---	---	---	----

Letter	आ	न्	उ	र्	ऊ	प्	य्	ए	ण्	ट
TCV	2	8	3	3	6	5	1	6	7	1

2. Simple English Rendering of the working rule of Ganita Sutra 1 (Ekadhikena Purvena) is 'one more than before', and the simple English rendering of the working rule of Ganita Upsutra 1 (Anurupyena) is 'to follow values proportionally'.
3. Ganita Sutra 1 leads to 'sequential ordering' of values of numbers and formats of bodies. And Ganita Upsutra 1 settles the rule of symmetry as of 'steps of following the forms as are framed'.
4. 'Sequential ordering of values of numbers and of geometric formats of bodies', and 'the steps of structural organization of forms as are framed', together lead to the processing steps of Vedic systems steps, including that of Vedic Mathematics, in general, and Vedic arithmetic, in particular.
5. Ganita Sutra 1 and Ganita Upsutra 1, together are the source values of processing steps of Vedic Mathematics.
6. The working rule 'one more than before' of Ganita Sutra 1, helps us reach numbers values sequence '1, 2, 3, 4, ----', and the emerging sequential ordering format of these values, with the help of the working rule of proportionately symmetrical values sequence, leads to the sequentially repeated values steps, bringing us face to face with:
 - (i) 'one, two, three, four, ---
 - (ii) 'single, double, triple, quadruple, ---
 - (iii) 'first, second, third, fourth, ---
 - (iv) 'firstly, secondly, thirdly, fourthly, ---

- (v) (one), (one and two), (one, two and three), (one, two, three and four),---
- (vi) (1, 1+2, 1+2+3, 1+2+3+4, ---) and
(1, 1 x 2, 1 x 2 x 3, 1 x 2 x 3 x 4---), and like that
1, 2, 3, 4, 5, ---
2, 3, 4, 5, 6, ---
3, 4, 5, 6, 7, ---
4, 5, 6, 7, 8, ---
-- -- -- --
- (vii) (point, line, surface, solid, hyper solid 4, hyper solid-5, hyper solid-6, ---)
- (viii) (0-space body, 1-space body, 2-space body, 3-space body, 4-Space body, ---)
- (ix) (0-space, 1-space, 2-Space, 3-Space, 4-Space, ---)
- (x) (single dimension, double dimensions, triple dimensions, quadruple dimensions, ---)
- (xi) (first axis, second axis, third axis, fourth axis,---
- (xii) (linear order, spatial order, solid order, creative order, ---)
- (xiii) Liner boundary, spatial boundary, solid boundary, creative boundary,---
- (xiv) Length, area, volume, hyper volume-4, hyper volume-5,---
- (xv) Linear origin, spatial origin, solid origin, creative origin, ---
- (xvi) Single variable, double variable, triple variable, quadruple variable, ----
- (xvii) Linear equations, quadratic equations, cubic equations, creative power equations, ---
- (xviii) 1 x 1 grid, 2 x 2 grid, 3 x 3 grid, 4 x 4 grid, ---
- (xix) 1, 1 x 1, 1 x 1 x 1, 1 x 1 x 1, ----
- (xx) 1/1, 1/2, 1/3, 1/4, 1/5, ---

7. Ganita Sutra 1 and Ganita Upsutra 1, together further bring us face to face with very rich spectrum of domains reach, illustratively
- (i) Interval as $(x+2)^1$, Square as $(x+2)^2$, Cube as $(x+2)^3$, ---
 - (ii) Total choices from $(1, 2, 3, 4, \dots, n)$ for summation value n is 2^{n-1} for values of $n = 1, 2, 3, 4, \dots, n, n + 1, \dots$.
 - (iii) Triangle, Rectangle, Pentagon, Hexagon, ---
 - (iv) Interval has two end points, square as four boundary lines, cube has six surface plates, hyper cube 4 has solid boundary of eight components, hyper cube 5 has creative boundary of ten components, ---.
 - (v) Interval as one space body as dimensional frame of single dimension, Square as two space body as dimensional frame of two dimension, Cube as three space body as dimensional frame of three dimension, ---
 - (vi) (-1 space plays the role of dimension of 1-space), (0-space plays the role of dimension of 2-space), (1-space plays the role of dimension of 3-space), ----
 - (vii) Interval is hyper cube 1 of four folds (-1 space, 0 space, 1 space, 2 space); Square is hyper cube 2 of four folds (0 space, 1 space, 2 space, 3 space); Cube is hyper cube 3 of four folds (1 space, 2 space, 3 space, 4 space); ----
 - (viii) 1 as 1 leads to $(1, 2, 3, 4, \dots)$, 2 as 1 leads to $(2, 4, 6, 8, \dots)$, 3 as 1 leads to $(3, 6, 9, 12, \dots)$, ----
 - (ix) Right angle triangles $(3, 4, 5)$, $(6, 8, 10)$, $(9, 12, 15)$, ---
-
 - (x) Right angle triangles $(3, 4, 5)$, $(5, 12, 13)$, $(13, 10, 17)$, ---

8. Ganita Sutra 1 and Ganita Sutra 2 together lead to Ganita Sutra 2 and Ganita Upsutra 2 of values formats ten place value system, and all other place value systems.
9. Ganita Sutra 1 and Ganita Sutra 2 lead to association of values for alphabet letters A to Z as:

A = 1, B = 2, C = 3, D = 4, E = 5, F = 6,

G = 7, H = 8, I = 9, J = 10, K = 11, L = 12,

M = 13, N = 14, O = 15, P = 16, Q = 17, R = 18,

S = 19, T = 20, U = 21, V = 22, W = 23, X = 24

Y = 25, Z = 26.

These associated values 1 to 26 of alphabet letters A to Z, in that sequence and order may be taken as the numbers values formats (NVFs) of the alphabet letters. It may be expressed as NVF (A) = 1, NVF (B) = 2, --- NVF (Z) = 26,

10. Further Ganita Sutra 1 and Ganita Upsutra 1 will help us reach at the association of following values with different groups of letters of Devnagri alphabet, to be designated as transcendental code values of these letters.

DEVNAGRI ALPHABET FORMAT

Transcendental code values format

Vowels

Letter अ इ उ ऋ लृ ए ओ ऐ औ

Vedic mathematics, Science & Technology Text Book for Class IX
748

TCV values 1 2 3 4 5 6 7 8 9

Consonants

Letters क ख ग घ ङ

TCV values 1 2 3 4 5

Letters च छ ज झ ञ

TCV values 2 3 4 5 6

Letters ट ठ ड ढ ण

TCV values 3 4 5 6 7

Letters त थ द ध न

TCV values 4 5 6 7 8

Letters प फ ब भ म

TCV values 5 6 7 8 9

Other letters

Letters य व र ल

TCV values 1 3 5 7

Letters श स ष ह

TCV values 2 3 6 9

Letters • ◡ ◣ ◤ : ✕ ◡ ∞

TCV values 9 10 11 12 13 14 15 16

Thy synonym is *Parnava*.

(*Tasey Vachka Parnava*) प्रणवः

TCV value (प्रणवः) = 36

11. It would be a blissful exercise to sequentially reach at the transcendental code values of the letters of the text of Ganita Sutra 1 of reach as follows :

Ganita Sutra-1

एकाधिकेन पूर्वेण

1	2	3	4	5	6	7	8	9
ए	क्	टा	ध्	इ	क्	ए	न्	अ
10	11	12	13	14	15	16		
प्	उ	र्	व्	ए	ण्	ट		

12. It would further be a blissful exercise to sequentially reach at the transcendental code values of the letters of the text of Ganita Upsutra 1 of reach as follows :

Ganita Upsutra – 1

आनुरूप्ये

1	2	3	4	5	6	7	8	9	10
आ	न्	उ	र्	ऊ	प्	य्	ए	ण्	ट



VEDIC MATHEMATICS TEXT BOOKS

13. Objectives
14. Learning And Teaching Phases
15. High & Higher Secondary Level Schooling Phase
16. Vedic Mathematics Dictionary
17. Dash Sahstra (ten thousand)
18. Numbers values and values numbers
 - a. Numbers values
19. Different generic unit
20. Transition from linear to spatial order VMS & T
21. Spatial order VMS & T
22. 4-space VMS & T
23. Transition from 4-space to 5-space
24. 6-space VMS & T

VEDIC MATHEMATICS TEXT BOOKS

I OBJECTIVES

1. To teach Phase wise values of mathematics in graded steps.
2. To achieve sequential growth of intelligence for young minds.
3. To aim perfection of intelligence of young minds.
4. To enliven consciousness based intelligence field to attain values based approach to Existence Phenomenon.
5. To be in unison with the natural order of our solar universe.
6. To glimpse and imbibe the values of ancient wisdom with Vedas as the core.
7. To reach at the wholesome Ved which stood organized as 4 Vedas: Rig Ved, Yajur Ved, Sam Ved and Athrav Ved of 21, 101, 1000 and 9 branches respectively with Shakala Rig Ved Samhita being the prime source Vedic Samhita.
8. To live full life span blissfully.
9. Let everyone lives full life span blissfully.
10. Let this Bharmanad exists as per its natural order.

2

LEARNING AND TEACHING PHASES

1. Learning and teaching phases of each young mind are of its individualist values features based.
2. Biological age format is of physical manifestations which may be availed as a general flow path but speed of

progression for the intelligence field is to depend upon the inherent potentiality with which individual is born.

3. As such, the most secret duty of parents and teachers and every authority and institution would be to have natural order assessment of the young mind for determination of its learning phases.
4. Taking present day charters of nursery, primary, middle and high & higher secondary level phases of schooling and parallel to it the biological age time line of up-till five years, ten years, thirteen years, fifteen years and seventeen years age, may or may not be the specifics for every child and its schooling phase.
5. Within, this individualist flexing, values inculcation flexion is to be determinint.
6. It is this intechual inculcation flexion index of values which will be determining the gradation steps to be covered by the young mind within particular phase of schooling.
7. The author of Vedic Mathematics text books, as such have to be fully conscious of the expectation of particular grade steps of particular phase of teaching of the particular young mind.

3

HIGH & HIGHER SECONDARY LEVEL SCHOOLING PHASE

1. High & Higher secondary school level learning is the final phase of schooling.
2. With it, one is to expect comprehending the values of our Existence Phenomenon within our Solar Universe.

3. To simultaneously glimpse and imbibe the values of Existence Phenomenon within human frame and of Existence Phenomenon without human frame is to become the virtue of the perfection of intelligence attained during all these years of schooling.
4. Graded steps of this final phase of schooling are going to be of values of 3, 4, 5 and 6-spaces formats respectively.
5. It would be blissful to take note that these quadruple graded steps of learning as of values of (3, 4, 5, 6) spaces formats shall be of manifested format of four folds manifestation layer of hyper cube 5, being the representative regular body of 5-space within 4-space.
6. It is this arrangement which shall be providing consciousness format for the intelligence field which shall be imbibing the values of Existence Phenomenon within Human frame and without Human frame.
7. With it, a transcendental take off format will be available.
8. It is this attainment, which is going to be parallel to the take off at the transcendental boundary of self-referral domain, which shall be promising aspired unity state by the Sadhakas fulfilled with intensity of urge to know and to explore further.
9. It is for these values and virtues of learning and teaching that the schooling of this phase is to be, and same for to be fulfilled as inspirations of the student, the author have to come up-to such expectation from their books of High & Higher secondary school Vedic Mathematics.

1. Each student of Vedic Mathematics shall make one's own dictionary of Vedic Mathematics.
2. One shall design and organize one's dictionary as per his own comprehension and visualization the values of Vedic Mathematics.
3. One shall continuously update one's dictionary.
4. Let one's dictionary be the index of self evaluation of one's own comprehension and imbibing of the values of Vedic Mathematics.
5. One shall aspire to fully glimpse and to completely imbibe the Vedic knowledge and the features of the organization format of Vedic knowledge and systems.
6. One shall be fulfilled with an intensity of urge to know and to explore further and further one may share entries of one's dictionary of Vedic Mathematics values with others.
7. Let one's dictionary be the basis of evaluation certificate which one shall expect from the school.
8. Let one's dictionary to provide a takeoff of one's higher studies.

5

DASH SAHSTRA (TEN THOUSAND)

1. Formulation *dash* accepts TCV value ten.
2. Formulation *sahstra* accepts TCV value 23.
3. With it, TCV value of formulation *dash sahstra* comes to be $10+23 = 33$.
4. One may have a pause here and take note that number value 33 avails digit 3 for both places.
5. One may further have a pause here and take note that number value 33 accepts organization as $(3 \times 11) = 3(01+10)$.

6. One may further have a pause here and take note that values pair (01, 10) constitute a reflection pair of artifices of numbers as much as that here digit 0 and 1 swap their places.
7. This also takes us to the values pair (03, 30).
8. Further as that, $(3) = (1+1+1)$ and $(30) = (10+10+10)$ help glimpse and imbibe the organization format $(01+01+01)$ and $(10+10+10)$ as a set up of a 3 dimensional frame as a synthetic set up of a pair of 3 dimensional frames of half dimensions of opposite orientations.
9. One may have a pause here and to permit the transcending mind to glimpse these organization format features of number value 33 and of a 3 dimensional frame.
10. One may further have a pause here and take note that the synthetic set up of a 3 dimensional frame as a set up of pair of 3 dimensional frame of half dimensions of opposite orientations as a 4-space as an origin.
11. 4-space is a spatial order space.
12. A dimensional frame of 4-space is set up of quadruple spatial dimensions and a solid order transcendental origin (5-space) as origin with 3-space as dimensional order of the origin).
13. Further as that square is the representative regular body of 4-space.
14. Square accepts organization as quadruple quarter square.
15. One may have a pause here and take note that the synthesis set up of 3 quarter squares manifests with the feature that the 4th un-manifest quarter square marks its presence of its own in this set up of triple quarter squares.

16. One may further have a pause here and take note that square is a 4 folds manifestation layer with 3-space playing the role of origin of 2-space domain.
17. One may have a pause here and take note that the centre of each of the quadruple quarter square is going to be the seat of 3-space set up I the role of origin of 2-space.
18. That way, there would be an availability of as many as quadruple centers as seats of quadruples solids.
19. There by this organization fixation of the square would be of value $3^4 = 81$.
20. One may have a pause here and take note that as only triple quarter square are sufficient to fix the set up the square, as such, such fixation will lead to value $3^3 = 27$.
21. One may have a pause here and take note that NVF (SQUARE) = 81.
22. Still further, as that, NVF (HALF) = 27.
23. And, NVF (SUN) = $54 = 27+27 = \text{NVF (HALF)} + \text{NVF (HALF)}$.
24. It would be blissful to take note that there are 27 *nakshatras*.
25. Further as that, solar universe is organized as northern hemisphere universe and southern hemisphere universe.
26. One may further have a pause here and take note that number value 81 avails a pair of digit (1, 8) which accepts re-organization as $(1^3, 2^3)$.
27. Here would be relevant to take note that pair of value $(1^3, 2^3)$ of the first pair of member of the sequences of cubes $(1^3, 2^3, 3^3, 4^3, 5^3, 6^3, 7^3, 8^3, 9^3, 10^3, 11^3 \dots)$.
28. Third member of the sequence 3^3 .
29. Number value 3 as third fold of 4 folds manifestation layer (1, 2, 3, 4) of hyper cube 3, shall be further bringing us face to face with a roles of 4-space as origin of 3-space.

30. It will further, brings us face to face with the Sathapatya measuring rod synthesis hyper cubes (1, 2, 3, 4) of 4-space domain, shall be parallel to the format of summation value of quadruples value (1, 2, 3, 4), that is $(1+2+3+4) = (10)$.
31. This reach within 4-space domain shall be leading to value 10^4 for the exhaustive coverage of 4-space domain, here in the role of origin of 3-space.
32. One may have a pause here and take note that it shall be bringing us face to face with 3-space domain being the manifested domain and its centre, as origin being the un-manifest state origin.
33. It will brings us face to face with the feature of 4-space being a spatial order space and square being the synthetic set up quadruple quarter square and manifestation of triple quarter squares fix the 4th quarter square in its un-manifest state.
34. It as such shall be providing a format for reach from 10^3 to 10^4 .
35. One shall have a pause here and take note that this format of reach from 10^3 to 10^4 makes 10^3 parallel to triple quarter squares manifested format.
36. With it, the reach for 10^4 becomes of manifested foundation of number value range 10^3 .
37. It would be a blissful to take note that TCV (SAHSTRA) = NVF (ANANT).
38. It is this feature of Vedic Mathematics system which deserves to be comprehended well.
39. This comprehension will help work out infinite sequence of infinite sequences.
40. It is this attainment of Vedic system deserves to be fully appreciated for its complete imbibing to acquire proper insight and appropriate enlightenment about the virtue

of this value of Vedic system chasing infinite sequence of infinite sequences in terms of artifices of numbers values 1 to 1000.

41. Student of Vedic Mathematics shall acquainted themselves with number values range 1 to 1000.
42. It would be a blissful to take note that number value range 1 to 10 is having only one perfect number namely 6.
43. Further relevant to take note that value range 1 to 100 as a pair of perfect numbers (6, 28).
44. And, number value range 1 to 1000 as triple perfect numbers (6, 28, 496).
45. It would be a blissful to take note that number value 6 as only 3 proper divisors with 3 as the biggest proper prime divisor.
46. Further as that, number value 28 accepts 5 proper divisors with seven as the biggest proper prime divisor.
47. A step ahead, perfect number 496 accepts 9 proper divisors with 31 being the biggest proper prime divisor.
48. One may have a pause here and take note that number value 31 as dimension shall be leading to number value 33 as domain.
49. It would be a blissful to take note that number value 33 is parallel to transcendental code value 33 of formulation *dash sabstra* (ten thousand).
50. It would be a blissful to take note that number value 31 is format feature of 1-space playing the role of dimension of 3-space.
51. Still further, it would be a blissful to take note that the number value 31 is the synthesis value of a pair of transcendence ranges of linear order, viz. $[(1+2+3+4+5) + (1) + (1+2+3+4+5)]$.

52. It would be a blissful to take note that 9 numeral range of ten place value system has numeral 5 of its middle placement.
53. And further, five numeral of 6 place value system as numeral 3 of middle placement.
54. One shall sit comfortably and permit the transcending mind to continuously remain in prolonged sitting of trans and to glimpse and imbibe the above formats features and values.
55. Sadhakas fulfilled with intensity of urge to know and to explore further shall reach at 4th perfect number and to chase quadruple perfects number of the range of numbers 1 to 10000.
56. It would be a blissful to revisit the synthetic set up of a 3 dimensional frame as a pair of 3 dimensional frames of half dimensions of opposite orientation synthesized by creative origin (4-space as origin) of spatial order.
57. It would be a blissful to visit transcendental churning and the seat of creative origin. The transcendental churning at the seat of creative origin of spatial order shall be of a cyclic feature around the origin as the centre of the churning.
58. The both halves of 3 dimensional frame shall be availing a common spatial format with origin as centre of churning being the centre of spatial format/ base for churning.
59. One may have a pause here and take note that:
 - i. $(3, 3) = 5$ is the dimensional synthesis equation of a pair of solid dimensions.
 - ii. $(3 \times 3) = 9$.
 - iii. There are 9 versions of hyper cube 4.
 - iv. There are 9 geometries of 4-space.
 - v. 5-space plays the role of origin of 4-space.

- vi. Transcendence triple (1, 3, 5) leads to summation value $(1+3+5) = 9$.
 - vii. Numeral 5 is of middle placement of 9 numeral range.
 - viii. Numeral 3 is of middle placement of 5 numeral range.
60. It would further be blissful to take note that transcendence at 5-space origin for its reach uptill 6-space base with 4-space in the role of dimension of 6-space, shall be further bringing us face to face with following feature
- i. $3+3=6$
 - ii. $(1+3+5)=9$
 - iii. $(1 \times 3 \times 5) = 15$
 - iv. $15 = 9+6$
 - v. Of these features put together bring us face to face with the following organizing features:
 - vi. $3^2 = 9$
 - vii. $3+2 = 5$
 - viii. $2 \times 5 + 1 = 11$
 - ix. $2 \times 11 + 1 = 23$
61. It would lead to generic
- i. $N \times N = N^2$
 - ii. $N+2$
 - iii. $2N+5$
 - iv. $4N+11$
 - v. $N = 3$ becomes the above particular case of the general case.
 - vi. In general by putting the values $N = (-3, -2, -1, 0, 1, 2, 3, 4 \dots)$ we shall be reaching final reach stage value for $4N+11$ as:
 $(-1, 3, 7, 11, 15, 19, 23, 27 \dots)$.

62. One shall sit comfortably and permit the transcending mind to revisit above set up of n^2 for its all values and to glimpse the final attainment value 4×11 for all those cases.
63. It would be a blissful to take note that this brings us face to face with the spatial dimension permitting transcendence at the origin of creator the space.
64. One shall visit and revisit above features, time and again, and to fully comprehend and to completely appreciate through imbibing of the above format features and values of spatial order set ups $(10 \times 10)^2$ of artifices range one to ten thousands artifices of numbers.
65. This attainment of Vedic systems need be worked out with full detailed by the students of Vedic Mathematics, Science & Technology.

6

NUMBERS VALUES AND VALUES NUMBERS

Numbers values

1. Number value (1) deserves to be glimpsed.
2. The wholeness of number (1) brings us face to face with its wholeness.
3. It is this wholeness of number (1) which helps us comprehend value of number (1).
4. This value of wholeness feature of number (1) helps us comprehend it as single artifice running through and integrating the value domain of number (1).
5. The imbibing of this comprehension will help us glimpse a state prior to it, being void of it, accepting value zero and number (0), a distinct prior affine state.

6. This distinctiveness of artifices of number (1) from a prior state value of affine state as number (0), deserves to be appreciated well to acquire proper insight and to attain appropriate enlightenment about number (1) and (0), as well as about their values and also about their respective artifices running through and binding the values domain.
7. One shall sit comfortably and permit the transcending mind to sequentially chase firstly the sequence of values of number value (0) as (0, 0, 0, 0 ...).
8. At next step one shall chased (1, 1, 1, 1 ...).
9. One may have a pause here and take note that values sequence (0, 0, 0, 0, ...) leads us to values sequences (0, 0+0, 0+0+0, 0+0+0+0, ...) which absorbs the structures and gets re-organized as (0, 0, 0, 0, ...).
10. One shall sit comfortably and permit the transcending mind to continuously remain in prolonged sitting of trans and to glimpse and imbibe the above formats features and values.
11. On the other hand, the values sequence (1, 1, 1, 1 ...) leads to sequence (1, 1+1, 1+1+1, 1+1+1+1 ...) which as (1, 2, 3, 4 ...) brings to focus different spectrum of numbers values.
12. One shall sit comfortably and permit the transcending mind to continuously remain in prolonged sitting of trans and to glimpse and imbibe the above formats features and values.
13. It would be a blissful exercise to glimpse distinguishing feature of a pair of sequences (0, 0, 0, 0 ...) and (1, 1, 1, 1 ...).
14. It would further be a very blissful exercise to glimpse distinguishing feature of pair of sequences (1, 1, 1, 1, 1 ...) and (1, 2, 3, 4 ...).

15. One shall have a pause here and to glimpse the distinguishing features of distinctiveness feature, firstly, the first pair of sequences $(0, 0, 0, 0 \dots)$ and $(0, 0+0, 0+0+0, 0+0+0+0 \dots)$.
16. Secondly of $(0, 0, 0, 0 \dots)$ and $(1, 1, 1, 1 \dots)$.
17. And thirdly of $(1, 1, 1, 1 \dots)$ and $(1, 2, 3, 4 \dots)$.
18. A step ahead, one shall glimpse and reach at the parallel and distinguishing feature of a pair of sequences $(1, 2, 3, 4 \dots)$ and $(1, 1+2, 1+2+3, 1+2+3+4 \dots)$.
19. One may further have a pause here and reach at, parallel and distinguishing feature of the pair of sequences $(1, 1, 1, 1 \dots)$ and $(2, 2, 2, 2 \dots)$.
20. It would be a very blissful exercise to reach at the parallel and distinguishing feature of a pair of sequences $(1, 1+2, 1+2+3, 1+2+3+4 \dots)$ and $(2, 2+2, 2+2+2, 2+2+2+2 \dots)$.
21. It would be a blissful exercise to reach at difference value at each step of the above pair of sequence being of value $(1, 3, 6, 10, 15, 21 \dots)$ and $(2, 4, 6, 8, 10, 12 \dots)$ coming to be $(-1, -1, 0, 2, 5, 9 \dots)$.
22. One may have a pause here and take note that the above difference value sequence $(\dots -1, -1, 0, 2, 5, 9 \dots)$, as for as the limb $(0, 2, 5, 9 \dots)$ is concerned same leads us to the consecutive steps values difference sequence being as value $(2-0=2, 5-2=3, 9-5=4, \dots)$.
23. One may have a pause here and take note that this as such makes a values sequence $(2, 3, 4 \dots)$.
24. The same also takes us to $(0, 1, 2, 3, 4 \dots)$.
25. One may have a pause here and take note that this extension of sequence $(1, 2, 3, 4 \dots)$ into $(0, 1, 2, 3, 4)$ is designated and is accepted as an extension of natural numbers $(1, 2, 3, 4, 5 \dots)$ into whole numbers sequence $(0, 1, 2, 3, 4, 5 \dots)$.

26. One may have a pause here and take note that the inclusion and acceptance of number value (0) as whole number (0) deserves to be glimpsed fully and same to be comprehended completely for its through appreciation to acquire proper insight and to attain appropriate enlightenment.
27. One may have a pause here, and to permit the transcending mind to continuously remain in prolonged trans and to imbibe the further extension for the numbers value range (0, 1, 2, 3, 4, 5 ...) into a numbers values range (... -5, -4, -3, -2, -1, 0, 1, 2, 3, 4, 5 ...).
28. One may have a pause here and permit the transcending mind to sequentially extend the numbers values sequence (0, 1, 2, 3, 4, 5 ...), into (... -5, -4, -3, -2, -1, 0, 1, 2, 3, 4, 5 ...), as steps.
 - a. (-1, 0, 1)
 - b. (-2, -1, 0, 1, 2)
 - c. (-3, -2, -1, 0, 1, 2, 3)
 - d. (-4, -3, -2, -1, 0, 1, 2, 3, 4)
 - e. (-5, -4, -3, -2, -1, 0, 1, 2, 3, 4, 5)
 - f. And so on.
29. The above steps will of the format of (interval, square, cube, hyper cube 4, hyper cube 5 ...), as these formats are of versions parallel to geometries range of the respective space (0, 1, 2, 3, 4, 5 ...) of signature ranges (-1, 0, 1), (-2, -1, 0, 1, 2), (-3, -2, -1, 0, 1, 2, 3), (-4, -3, -2, -1, 0, 1, 2, 3, 4), (-5, -4, -3, -2, -1, 0, 1, 2, 3, 4, 5), and so on.
30. It would be a blissful exercise to revisit above spectrum of numbers values and values numbers being of the sequential format of Sathapatya measuring rod synthesized by hyper cubes.
31. It would further be a blissful to comprehend above steps of reach being the exercise of sequentially applying the

steps of working rule of Ganita Sutra 1 (one more than before) and of Ganita Upsutra 1 (proposanilaity symmetry).

32. One shall reach at above steps with the help of working rules of Ganita Sutra 1 and Ganita Upsutra 1.

7

DIFFERENT GENERIC UNIT

1. Vedic system accepts distinct generic units for each space domain.
2. The units of specific space are of the features of the dimensional order of the domain.
3. Dimensional order, in itself is a role of different domain, that is a domain of 2 degrees below than that of the domain of which is the domain of the dimensional order.
4. Domain of order N will be taking us to domain of order $(N-2)$ to play the role of dimensional order for domain N .
5. N -space domain and $(N-2)$ space domain get interrelated as N -space domain as domain and $(N-2)$ space domain as dimension of N -space domain.
6. This relationship permits expression and chase in terms of a pair of values $(N, N-2)$ parallel to N -space in the role of domain and $(N-2)$ space in the role of dimensions.
7. One may have a pause here and take note that these roles of N -space and $(N-2)$ space, infact are the roles of N -space content and $(N-2)$ space content respectively.
8. One may have a pause here and take note that above relationship, ultimately takes up to the relationship of a pair of dimensional spaces contents as N -space content

- and (N-2) space content. This relationship, in way is a jump over the in-between (N-1) space content.
9. One may have a pause here and to permit the transcending mind to comprehend and glimpse the above relationship feature.
 10. Within, a space domain, there is a continuity of the space content the particular space whose content is manifesting as a domain.
 11. However, a shift from a given space content to another space content will be resulting into space content values gap.
 12. It is this gap for whose bridging there is a need for a system.
 13. The Vedic system avails simultaneous manifestation for consecutive quadruple, dimensional space contents.
 14. This is of a value of the format of hyper cube as a four folds manifestation layer parallel to the format features and values of Idol of Lord Brahma, Creator's Supreme, Over Lord of real 4-space of a spatial dimensional order.
 15. This format simultaneously avails quadruple domains.
 16. This brings in the feature of domain fold being enveloped by a boundary fold.
 17. Further, it also brings in the domain fold accepting origin fold within itself.
 18. The domain- boundary fold set up of hyper cube 1 brings us face to face with a pair of points (boundary points) covering a unit (of domain fold).
 19. One may have a pause here and take note that note that this sequentially brings us face to face with a set up of N points having a coverage for (N-1) units.
 20. One may have a pause here and take note that this, that way brings us a shift from generic counts of points to new generic counts of gap unit.

21. One shall sit comfortably and permit the transcending mind to continuously remain in a prolonged sitting of trans and to fully comprehend and to completely imbibe the phenomenon of distinct generic counts of units.
22. A reach from points to gaps lines, and a step head from lines to gaps surfaces, and still ahead from surfaces to gap spaces, and so on is the phenomenon which deserves to be comprehended well.
23. One shall sit comfortably and permit the transcending mind to continuously remain in prolonged sitting of trans and to glimpse and imbibe the above formats features and values.
24. It would be a blissful to visit and revisit a synthetic set up of a Sathapatya measuring rod presided by lord Vishnu., the over Lord of real 6-space and it measure being presided by Lord Braham, the over Lord of real 4-space.
25. Measuring rod being of generic unit of 6-space and its measure being of generic unit of 4-space is the feature which deserves to be comprehended well.
26. This in general takes us to N-space domain generic unit being of value N while its dimension is going to be of generic unit of value $(N-2)$.

8

TRANSITION FROM LINEAR TO SPATIAL ORDER VMS & T

1. Transition from linear order to spatial order results into a reach from 3-space to 4-space.
2. Reality of 4-space deserves to be glimpsed fully.
3. It may comprehend completely.

4. Same is to be imbibed thoroughly.
5. It is with, proper appreciation of the imbibed values of reality of 4-space which is to provides us desired insight about the existence phenomenon of creator's space (4-space).
6. For attainment of appropriate enlightenment about creator's space (4-space) one shall visit and to revisit, item and again, the format, features, values and virtues of Idol of Lord Brahma, the over Lord of creator's space.
7. It would be blissful to glimpse that the format of Idol of Lord Brahma is parallel to the format of hyper cube 4.
8. One shall sit comfortably and permit the transcending mind to have parallel organization of the features of formats of Idol of Lord Brahma and of hyper cube 4.
9. Lord Brahma has 4 heads, and parallel to it hyper cube 4 is a dimensional body of 4 dimensions.
10. Each head of Lord Braham is equipped with a pair of eyes, and parallel to it, each dimension of 4-space is of a spatial order (2-space) in the role of dimension of 4-space.
11. Lord Brahma sits comfortably on the lotus seat of 8 petals and parallel to it hyper cube 4 has a solid boundary of 8 components.
12. Within, cavity of heart of Lord Brahma is the seat of transcendental Lord Shiv, and parallel to it, 5-space plays the role of origin fold of 4-fold manifestation layers of hyper cube 4.
13. One shall sit comfortably and permit the transcending mind to continuously remain in prolonged sitting of trans and to glimpse and to imbibe the parallel organization of features of format of Lord Braham and of hyper cube 4.

9

SPATIAL ORDER VMS & T

1. Linear order VMS & T accepts '1 as 1' as a working unit.
2. Spatial order VMS & T accepts a pair of units '1 as 2 & 2 as 1' leading to ' $\frac{1}{2}$ ' as a working unit.
3. One shall sit comfortably and to comprehend the distinctive feature of '1 and $\frac{1}{2}$ ' being the working unit.
4. Further one shall glimpse the distinctive feature of a space within a dimensional frame of 3 dimensions from that of the space within a dimensional frame of quadruple spatial dimension.
5. Space within a dimensional frame of 3 linear dimensions and space within a dimensional frame of quadruple spatial dimension lead to manifestation of space content along the formats of hyper cube 3 and hyper cube 4 respectively.
6. With it, the working format of 3-space VMS & T comes to be that of hyper cube 3.
7. On the other hand, the working format of 4-space VMS & T comes to be hyper cube 4.
8. Hyper cube 3 is a 4 folds manifestation layer (1, 2, 3, 4) while hyper cube 4 is a 4 folds manifestation layer (2, 3, 4, 5).
9. One may have a pause here and take note that hyper cube 3 translate along the transcendental domain (5-space domain of hyper cube 5) and as a result there of, transition and transforms into hyper cube 4 format.
10. One may have a pause here and take note that to glimpse this phenomenon of transition and transformation from the format of hyper cube 3 to that of hyper cube 4.

10

4-SPACE VMS & T

1. 4-space VMS & T is of the format of hyper cube 4.
2. Hyper cube 4 is a four folds manifestation layer (2, 3, 4, 5)/ 2-space in the role of dimension, 3-space in the role of boundary, 4-space in the role of domain, 5-space in the role of origin.
3. Spatial order 2-space in the role of dimension leads to a dimensional frame of 4 spatial dimensions.
4. Solid boundary (3-space in the role of boundary) leads to solid envelop for 4-space constituted by 8 solids.
5. Creative domain (4-space in the role of domain) permits transcendence within it, of sequential format (4, 2, 0) / (4-space as domain, 2-space as dimensions, 0-space as dimension of dimension).
6. Transcendental origin (5-space as origin) is of a solid dimensional order, and as such, transcendence upward from origin within domain amounts to superimposition of solid order upon spatial order.
7. Further transcendence through the origin up-till base amounts a reach of spatial order up-till base fold and there being the superimposition of spatial order upon the solid order.
8. One may have a pause here and take note that 6-space plays the role of base fold for the transcendental origin of hyper cube 4.
9. One may have a pause here and take note that the summation value $(2+3+4+5+6) = 20$ is parallel to the transcendental code value of formulation VED.
10. As such, manifestation and transcendence are the pair of feature which deserves to be chased.
11. One may have a pause here and take note that 4-space as domain, 5-space as origin, 6-space as base, that way make a reach of 4-space VMS & T.

12. In a way it becomes the reach of Tri-Murti domain.

11

TRANSITION FROM 4-SPACE TO 5-SPACE

1. Transition from 4-space to 5-space is going to be a transition from 4-space reality to 5-space reality, it is going to be a transition from spatial order creation to solid order creation.
2. It is going to be a visualization of glimpsing by a head equipped with pair of eye to that of visualization of glimpsing by a head equipped with 3 eyes.
3. Glimpsing of universe with a pair of eyes and glimpsing of universe with a triple eye makes a transition from a mental state of a spatial order set up to mental state of glimpsing in terms of a solid dimensional order.
4. Spatial order reach is up-till 4-space while solid order reach is up-till 5-space.
5. Surface unifies a pair of dimensions, while solid unifies triple axes.
6. Surface integrate a pair of centres while solid integrate triple centres.
7. Triple centre, with distinct pairs of centres to be within distinct surfaces.
8. A universe reach in terms of a solid dimension integrating triple non-co-plainer pair of centre takes us to a set of $3^3 = 27$ coordinate fixation for a point within either of the hemisphere of the universe.
9. This requirement of $(27+27) = 54$ coordinates for fixation of a pair of points, one from each of the hemisphere, deserves to be appreciated to have an insight for the VMS & T solid order 5-space universe.

10. The split of universal sphere into a pair of hemisphere, in further unification of a pair of hemisphere into a universe sphere are the organizational feature of 5-space universe which deserves to be glimpsed fully for complete comprehension and appreciation.
11. Approaching each hemisphere of 5-space universe in term of 27 coordinates within a solid dimensional frame of triple half dimensions is the working format of 5-space VMS & T.
12. It brings us face to face with a pair of 3 dimensional frames of triple half solid dimension each for the exhaustive coverage of 5-space universe (being designated sky).
13. Approach to sky, as a pair of hemispheres emerges as the basic organization format of 5-space universe (sky).
14. Sky within a space and space within a sky are the other features of this organization format of 5-space universe (sky).
15. A transition from 5-space VMS & T to 6-space VMS & T is a step ahead, of transitional reach from the solid order universe to creative order universe (4-space in the role of dimension).
16. As creative order itself is of a spatial order, as such, 6-space VMS & T becomes of values of 2-space in the role of dimension of dimension.
17. It is this shift from 1-space in the role of dimension of dimension of 5-space to 2-space in the role of dimension of dimension of 6-space which deserves to be chased to glimpse and imbibe the transition from 5-space VMS & T to 6-space VMS & T.

1. 4-space domain permits transcendence within it along the transition from the 4-space as domain, 2-space as dimension, 0-space as dimension of dimension.
2. 5-space domain permits transcendence within itself along the transition from format the 5-space as domain, 3-space as dimension, 1-space as dimension of dimension.
3. 6-space domain permits transcendence within itself along the transition from format the 6-space as domain, 4-space as dimension, 2-space as dimension of dimension.
4. 6-space VMS & T is all about our solar universe.
5. It is also all about existence phenomenon within human frame it is of the chase format of Sathapatya measuring rod presided by lord Vishnu (over lord of 6-space).
6. The measure of this Sathapatya measuring rod is presided by Lord Brahma, over lord of real 6-space.
7. This format makes the translation path of transcendental carriers presided by transcendental lord shiv, over lord of real 5-space.
8. Sadhakas fulfilled with intensity of urge to know and to explore further initiate transcendence at orb of the sun and have a reach up-till Brahman domain.
9. Brahman domain plays the role of origin of natural domain (8-space domain).
10. Its 8-space domain is self-referral order (6-space in the role of dimension of 8-space).

13

MANIFESTATION LAYER (6, 7, 8, 9)

1. Manifestation layer (6, 7, 8, 9) takes to format of hyper cube 8 with 6-space in the role of dimension, 7-space in the role of boundary, 8-space in the role of domain and 9-space in the role of origin.

2. A step ahead, is the format of 4 folds manifestation layer (9, 10, 11, 12) with 9-space in role of dimension, 10-space in the role of boundary, 11-space in the role of domain and 12-space in the role of origin.
3. This reach as such, is a reach of 3 sequential progressive transcendence steps, with first step being of the format (0, 1, 2, 3), second step being of format (3, 4, 5, 6) and third step being of format (6, 7, 8, 9).
4. A step ahead, a reach of format (9, 10, 11, 12).
5. First three step namely of formats of hyper cube 2, hyper cube 5 and hyper cube 8, together are of the manifested values, while the 4th step are the format of hyper cube 11 is of transcendental nature.
6. Transcendental reach step of format (9, 10, 11, 12) is the attainment reach of senior Sadhakas.
7. It is the attainment domain of Vedic Mathematics, Science & Technology.



Authors Appeal

Let us properly educate

our children about 'cube'

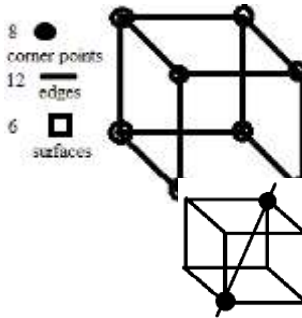
1. Let us have a fresh re-visit to cube and see how many features were missed during previous visit to the set up of the cube.
2. Urge to know and to reach at Vedic systems can be satisfied by proper understanding of one's body and initiation for it can be appropriately had started with formulation *Ghan* (घनः) / body cube matter.
3. The 'body cube matter' is 'Black', having a flow straight from 'pole-star' along the transcendental (5-space) carriers path of Sunlight, and the same as such makes 'body cube matter', just parallel to the format and features of 'Pole Star' on the one hand and being 'Sun Discipline' and on the other hand being parallel to Sun Discipline.
4. It would be parallel to note that NVF (Pole Star) = NVF (Black Matter)
= NVF (Sun Discipline) = NVF (Infinity) = NVF (Axis) + NVF (Axis)
5. The initiation of chase for *Ghan* (घनः) / body cube matter, naturally is to begin with the chase of the formulation 'घनः'.
6. The startwith chase formats for formulation 'घनः', like other formulations of Sanskrit alphabet, is to be in terms of
 - (i) Transcendental code values (TCV) of individual alphabet letters
 - (ii) Number Values formats (NVF) of artifices alphabet formatting artifices 1 to 26 and
 - (iii) Geometric components formats (GCF) for representative regular bodies manifesting as four fold manifestation layers.

7. Further dimensional synthesis values (DSV) of dimensions of same order like $DSV(1, 1) = 3$, $DSV(2, 2) = 4$, $DSV(3, 3) = 5$, $DSV(4, 4) = 6$ and so on $DSV(n, n) = n+2$, as well will help reach it working rule functional insight of format and features of the words compositions formulations of Sanskrit alphabet.
8. Still further Shad Chakras format of a human frame, a network of 72000 nerves, unity format of (Earth, Water, Fir, Air, Space, Pole Star), Black matter flow from Pole Star manifesting transcendental (5-space) carriers format of Sunlight for carrying and transmitting Space Content within whole range of Earth to Sun, and gentic code features chase along women body format, in terms of Pingala Chandas Geometry and Mathematics preserved in Sutras of PCS, and all that, that way as a single Discipline chase initiation starting with formulation 'Ghan घनः' deserve to be learnt.
9. TCV (घनः) = 27 and TCV (एकशिरा अन्त) = 31 brings to focus the pair of features of end reach of linear order set ups (cube) and 3-space content lump (unit volume) enveloped within a geometric envelope of 26 components (8 corner points, 12 edges and 6 surfaces) parallel to 26 meters range which is further parallel to 26 primes uptill '101' parallel to 101 branches of Yajurved
10. The quadruple artifices (0, 1, 2, 3) / (0-space points, 1 space lines, 2-space surfaces, 3-space volume) go parallel to the manifestation format of 3-space content lump (volume) enveloped within geometric component of corner points, edges and surfaces.
11. Transition from this format and features of cube as along the format of hyper cube 2 as a four fold manifestation layer (0, 1, 2, 3) with 3-space in the role of origin fold to the format and features of cube as along the format of hyper cube 3 as a our fold manifestation layer (1, 2, 3, 4) with 3-space in the role of domain fold deserve to be chased and to be comprehended well for its proper appreciation and complete imbibing to have an appropriate insight about the 'Ghan' / 'घनः' / body cube matter.
12. The reach from outer geometric envelope of 26 components with three folds (0, 1, 2) to the inner volume (origin fold) is of many features whose chase is to be of many steps and same is to be learnt.

13. Let us have a fresh visit to the set up of the cube as 3-space content lump of expression of volume in the role of origin of hyper cube 2 format stitching 26 components of 8 corner point, 12 edges and 6 surfaces.
14. In each of the corner points is embedded a three dimensional frame of half dimensions.
15. Each edge has a synthetic joint synthesizing a pair of dimensions supplied by the dimensional frames embedded in the corner points of the edge.
16. The synthesized pair of dimensions, as such are of opposite orientations and thereby these neutralize the orientations at the synthetic joint.
17. This synthesis that way brings into play a triple dimensional orders as triple folds $(-1, 0, 1) / (-1 \text{ space}, 0 \text{ space}, + 1 \text{ space})$ which accept 2-space in the role of origin.
18. Each of the surface is of a pair of faces of which one is of inward format and other is of out ward format.
19. Each surface face is a set up of 9 geometric components (4 corner points, 4 edges and 1 surface).
20. When a pair of surfaces synthesize for manifesting a common stitching edge, the first surface contributes 9 components while the second surface contributes only 6 components. And a step ahead when another surface is stitched its contribution remains only of 4 components.
21. The artifices triple $(9, 6, 4)$, has, amongst others a feature as that $4 \times 3 / 2 = 6, 6 \times 3/2 = 9$.
22. Here it also would be relevant to note that when a pair of cubes synthesize the contribution because of first cube comes to be of 27 components while because of the second cube remains to be of $27 = 9 = 18$.
23. And a step ahead the synthesize of 3 cubes shall be emerging as to be of 27, 18 and 12 components respectively.
24. Here it would be relevant to note that the synthesis of four cubes would be of respective contributions of 27, 18, 12, 8 components.
25. The artifices quadruple $(27, 18, 12, 8)$ has amongst others the feature as that $8 \times 3 / 2 = 12, 12 \times 3 / 2 = 18$ and $18 \times 3/2 = 27$.

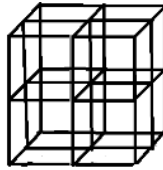
26. All these features deserve to be chased.
27. Let us revisit the cube again, which shall be bringing us face to face with the richness of the cube.

28. The geometric is of 26 corner point, 12
29. In each corner embedded a frame of half
30. There are four the cube.



envelope of the cube components (8 edges and 6 surfaces. point of the cube is three dimensional internal diagonals of

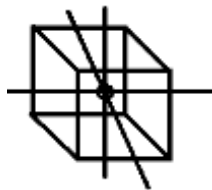
31. The three dimensional frame at center of the cube accepts a spatial format for each of the axes.
32. Cube permits split into 8 sub cubes.



33. The space (3-space as within geometric envelope stitched by a three with its origin super imposed upon the center of the cube.

volume) enveloped of 26 components is dimensional frame

34. The geometric set up of 31 components (8 edges, 6 surfaces, 1 origin).



the cube, as such is of corner points, 12 volume, 3 axes and 1

35. This as such makes out format components of = NVF (Cube).

that geometric cube: $GFC(\text{cube}) = 31$

36. Now if we have a pair of cubes synthesized together, these shall be leading to a geometric envelope of $31 + 22 = 53$ components.

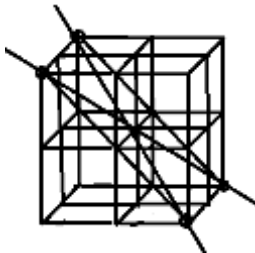
37. Here it would be the central plates of imposed and 9 components (4 corner surface) go unmanifest in the process of synthesis.



relevant to note that both cubes get super geometric points, 4 edges and 1

38. This way the reach from artifice value 31 to artifice value 53 brings us face to face with parallel shift from linear order 3-space to solid order 5-space.
39. It would further bring us face to face with the feature of synthetic value of linear and solid dimensional orders as that the pair of linear dimensions synthesize artifice value 3 and parallel to it 3-space set up and on the other hand the pair of solid dimensions synthesize artifice value 5 and parallel to it 5-space set up.
40. This will bring us face to face with the features of geometric envelope and internal set up of the cube which is responsible for non duplication of the cube and whole range of features which elude our normal approach to the set up of the cube simply equal to cubic units of volume only.

41. Internal diagonals pairing as two paired pairs along same internal surface have their role to play in making it to be of a solid dimensional order and as such one shall have a pause and the set up of the the pairing of the cube.



42. The translation of dimensional frames embedded in the the pair of three of half dimensions corners / end points of a diagonal and synthesis thereof as a three dimensional frame of full dimensions and thereby, that way, having a set of four additional three dimensional frames of full dimensions at center of the cube would make a set of five 3 dimensional frames of full dimensions which together shall be parallel to solid dimensional frame of 5-space.

43. One may have a pause here and take note that the seat of 4-space at center of the cube as origin of 3-space and thereby there being a spatial order dimensional frame of four spatial dimensions of the format of Swastik with solid order transcendental (5-space) base shall be making out a churning process of sequential emergence of Trimurti (lord Brahma, Lord Shiv and Lord Vishnu), preseiding deities of 4, 5 and 6-space respectivley for susteance of Triloki is the

phenomenon which deserve to be glimpsed fully and to be imbibed for complete insight of the compactification at the center of the cube / origin of 3-space.

44. Vedic systems chase this phenomenon.
45. Vedangas including chandas Vedanga avail this Ancient Wisdom.
46. Pingala Chandas Sutram consolidates this Ancient Wisdom.
47. The Geometry and Mathematics of Pingala Chandas Sutram works out in detail splits and synthesis of dimensional frames particularly of transcendental (5-space) domain, as is focused in Arya meter format of 15 syllables being a pair of $7\frac{1}{2}$ syllables.
48. Let us have a fresh look at the internal structural set up of volume part of the cube on whose center is the seat of creative (4-space) origin.
49. It is because of the Swastik frame of four spatial dimensions setup of 4-space marking its presence at center of the cube that churning takes place resulting into split of the cube into 8 sub cubes.
50. It would be blissful to note that the churning in terms of spatial order Swastik frame of 4-space at center of the cube is there because of the transcendental (5-space) base of the creative origin.
51. One shall have a pause here and permit the transcending mind to continuously remain in prolonged sitting of deep trans glimpsing churning taking place at center of the cube because of the transcendental (5-space) base of creative origin.
52. Further as that because of this churning, 8 sub cubes transit and transform in the role of solid boundary components of creator's space (4-space).
53. Further it also would be relevant to note that, in the process the transcendental (5-space) base of creative origin shall be of its own transiting and transforming into the role of transcendental (5-space) origin of creator's space (4-space).
54. Still further it also would be relevant to note that the transcendental (5-space) origin shall be manifesting transcendence format (1, 3, 5) with $(1+3+5) = 9$ and $1 \times 3 \times 5 = 15$ and thereby there would emerge transition and transformation from the spatial dimensional order of creator's space (4-space) into solid dimensional order of transcendental (5-space) domains.

55. Still further it also would be relevant to note that, in the process, there would manifest an internal cube at the center of the cube which would be of format and features parallel to that of sub cube of the cube.
56. And same would get placed with its eight corner points getting super imposed upon the centers of 8 sub cubes.
57. One shall have a pause here and permit the transcending mind to continuously remain in prolonged sitting of deep trans to glimpse this phenomenon of emergence of 9th sub cube with its center super imposed upon the center of the main cube.
58. With it, this 9th sub cube concentric with the outer main cube gets would fullfulled with the transcendental (5-space) inflow from the transcendental (5-space) base of creative origin.
59. This, in a way, is a transition and transformation for the inner cube to be the 'Sama' cube.
60. This is also indicative of process of the format of transition and transformation for the linear order contented domain fold into spatial order (cotented domain fold).
61. This, that would amounts to a transition and transformation from the first element 'Earth' to second element / 'Water'.
62. One may have a pause here and take note that the on the one had, cube split into 8 sub cubes and same transit and transform into the role of 8 solid boundary components of 4-space and on the other hand the creative origin (4-space) transform into transcendental (5-space) origin and still further Earth element transit and transform into Water element.
63. These features taken together, will help reach at the format and features of 10 Saraswati Mantras

1	ॐ प्रणो देव इति	2	आ नो दिव इति	3	पावका न इति
4	चेदचित्रीति	5	महो अर्ण इति	6	चत्वारि वागिति

7	यद्वागवदन्तीति	8	देवी वाचम्इति	9	उत त्व इति
10	अम्बितम्इति				

64. Mantra wise transcendental (5-space) code values of ten Saraswati mantra shall be leading us to artifices range (64, 67, 51, 50, 61, 60, 72, 68, 43, 56).
65. The chase of these composition's formulation's values shall be helping us to have insight about format and features of idol of creator, four head lord Brahma and his consort Goddess Saraswati along the format of hyper cube 4 with transcendental (5-space) origin.
66. Reach from here to $10 \times 8 = 80$ cubes need for coverage of the entrie creative boundary or ten components of transcendental (5-space), and further reach to $12 \times 10 \times 8 = 960$ cubes need for complete coverage of 212 years creative cycles of transcendental (5-space) domain deserve to be learnt, and for it, naturally learning is to be initiated with understanding of the format and features of cube itself.
67. Here it would be relevant to note that the set up of the cube as is of hyper cube 3 format, the same is in creator's space (4-space) and accordingly the script format for the first letter / vowel / akara emerges to be:

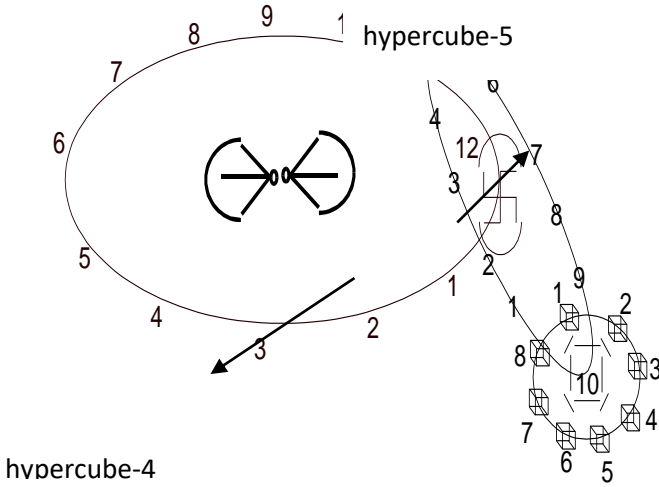


68. With this coverage range from first letter format to that of 960 cubes would be complete in the intiation for the students of Vedic systems having intensified urge to reach at the organization format of Sakala Rigved Samhita of 10 mandals, 8 austaks, 64 chapters, 85 Anuwaks, 1028 Suktas, 2024 Vargas, 10552 Richas and 432000

akshras / syllables of which 34735 are unmanifest and remaining 397265 are manifest.

69. For it author's appeal is let us teach our children and deciples – sadkhas properly about Ghan (घनः)

70. Let us be blissful with the set up of 960 cubes:



VMS & T Text Book Class IX

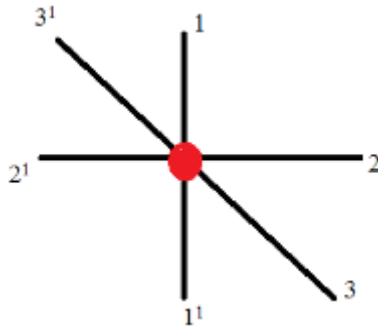
(3-space)

Introductory

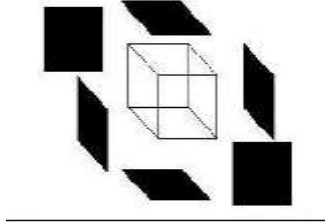
3-space VMS & T Format

57. Each space has its distinct, Mathematics, Sciences and technologies. The values of all these Disciplines constitute a distinct format, which is designated as Mathematics, Science & Technology format of the 'space'.
58. Ancient Wisdom of Vedic Systems lead to such formats, which are being designated as Vedic Mathematics, Sciences and Technology formats.
59. Mathematics chases 'space'. Sciences chase space matter. Technologies chase dimensional bodies. 3-space has its own Mathematics, Sciences and Technologies, which may designated as 3-space mathematics, 3-space Sciences and 3-space Technologies.
60. The values of these 3-space Disciplines, lead to wholesome Discipline, namely, 3-space Mathematics, Science & Technology format.
61. Vedic Wisdom systems reach towards it leads to 3-space Vedic mathematics, Science & Technology format.

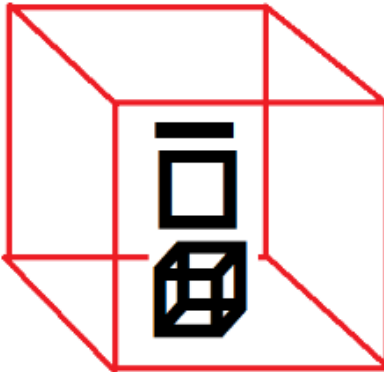
62. Basic components of this Discipline are sets of values of 3-space (Triloki) 3-space matter (content), 3-space bodies (hyper cube 3).
63. Present year's instructions focus is upon 3-space Vedic mathematics, Science & Technology format.
64. Centre of focus is going to be the format of 'cube' which makes 'cube', 'hyper cube-3', a set-up of (i) linear order (1-space content manifesting & playing the role of dimension / axis (ii) Spatial order (2-space content manifesting and playing the role of boundary being the set up of six surface plates (iii) 3-space content manifesting and playing the role of domain fold (volumme).
65. Center of focus of these instructions is going to be the reach of the format of 'cube' which comes to be the features of hyper cube-3 having four folds, namely.
- (i) Linear order, that is 1-space content manifests and plays the role of dimension / axis, three of which together make a 3-dimensional frame for 'space' to make it a 3-space with space itself playing the role of origin of this dimensional frame.



- (ii) Spatial boundary, that is, 2-space content manifesting and playing the role of boundary fold permitting its split into 6 parts, parallel to 6 parts of 3 axes.



- (iii) Solid domain (volumme), that is , 3-space content manifesting and playing the role of domain (volumme) permitting in terms of 'single, double and triple areas' steps all at a time as well.



- (iv) Hyper solid origin fold, that is space transcends its three dimensional frame and manifests as 4-space content format origin. Its synthesize three linear dimensions and constitutes a three dimensional frame. During this synthesis, it makes each axis a

pair of half axes. And half axis as a pair of quarter of axis, whereby cube splits into 8 sub cubes. And sub cube further splits into 8 sub sub cubes.

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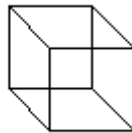
VMS & T Project
School Text Books
(Class IX, X, XI & XII)



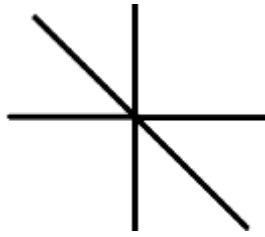
VMS & T Text Book Class IX
(3-space)

Lesson - 01
Cube (📐)

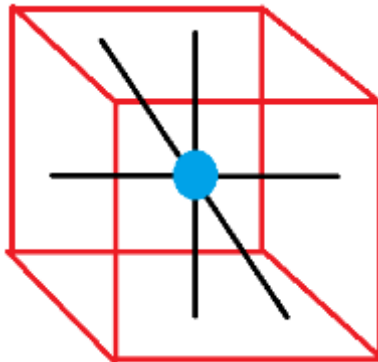
66. Cube (📐) is the representative regular body of 3-space.



67. Representative body is one which does not distinguish / prefer one dimension over another dimension.
68. 3-space accepts three linear dimension frame for its bodies



69. Linear dimension accepts 'length' as a 'unit'; pair of linear dimensions (designated as length unit and breadth unit respectively) accept 'area' as a unit, and all the three dimensions (designated as a length unit, breadth unit and height unit respectively) accept as 'volumme unit'.
70. The common point (joint) of three dimensions (of length, breadth and height units) is designated as origin of a three dimensional frame of linear dimensions.
71. Centre of cube (📐) super imposes upon origin of three dimensional frame.



72. The set up of 'cube' with its centre super imposed upon the origin of a three dimensional frame and each dimension coordinates the centres of a pair of

parallel surface plates of cube makes complete set up of regular body of 3-space.

73. The complete set up of cube (📐) as such makes out a set of 31 geometric components, namely

(vi) 8 corner points of cube (📐)

(vii) 12 edges of cube (📐)

(viii) 6 surfaces of cube (📐)

(ix) 1 volume of cube (📐)

(x) 3 dimensions of 3 dimensional frame

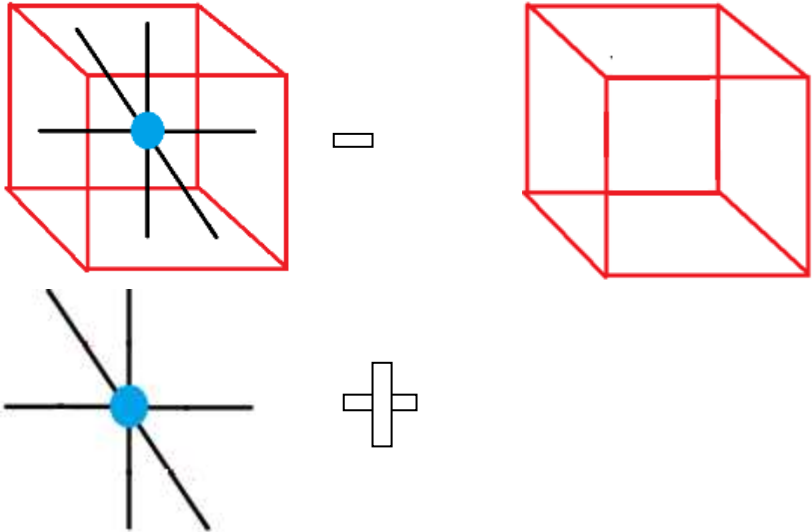
Total $8 + 12 + 6 + 1 + 3 + 1 = 31$ structural (geometric) components

Exercises

III. Define and tabulate different conceptual of technical terms of lesson

Hint : Cube (📐), representative regular body, 3-space, dimension, origin, dimensional frame, corner point, edge, surface, volume & centre of cube, length, breadth & height units, length area and volume units, complete set up of cube, structural geometric components, etc.

IV. Visit and revisit the following :



NVF (Cube) = 31
3 + 1

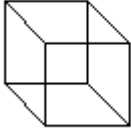
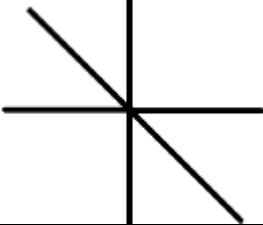
TCV (घनः)= 27

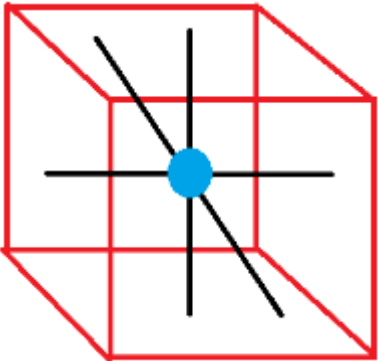
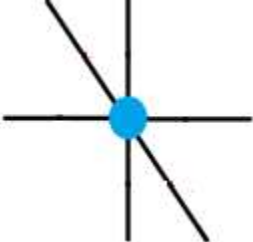
Technical terms

18. Cube (📐)
19. Representative body of 3-space
20. Three linear dimension
21. 'length' as a 'unit';
22. 'area' as a unit,
23. 'volumme as a unit'.
24. origin of space

- 25. origin of dimensional frame
- 26. Centre of cube
- 27. The set up of 'cube'
- 28. Complete set up of cube
- 29. corner points
- 30. edges
- 31. surfaces
- 32. volumme
- 33. structural components
- 34. geometric components

Figures

Sn.	Figure
1	
2	

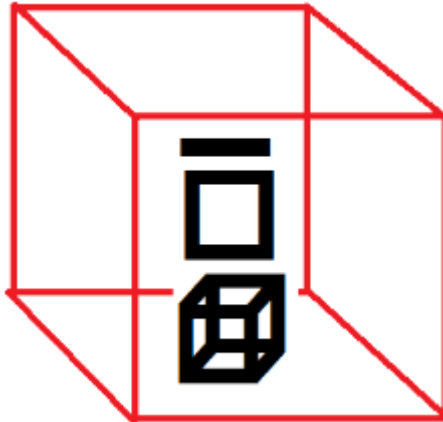
3	
4	

Lesson - 02

Geometric envelope of cube (📐)

35. The structural set up of cube as a set of 31 components (8 corner points, 12 edges, 6 surfaces, one volume, 3 axes and 1 origin), firstly permits classification of two parts (i) consisting of 8 corner points, 12 edges, 6 surfaces and 1 volume and (ii) 3 axes and 1 origin.
36. The second part consisting of 3 axes and 1 origin is designated as the three dimensional frame.
37. The first part which consist of 27 components namely (8 corner points, 12 edges, 6 surfaces and 1 volume) further permits classification in two parts (i) 8 corner points, 12 edges and 6 surfaces and (ii) 1 volume.
38. This single component set up of volume is designated as the domain part.
39. The set up of 26 components (8 corner points, 12 edges and 6 surfaces) together synthesize a geometric envelope for the domain / volume part of the cube.
40. Each of these 26 components of geometric envelope is of zero volume as corner points are devoid of length, breadth and height, while edges are devoid of breadth and height, and surfaces are devoid of heights.

41. With geometric envelope having no contribution towards the volume of the cube, as such one way to reach at the geometric envelope of the cube would be to devoid the cube of its volume.
42. As the volume is a manifested lump of 3-space content, and as this manifestation is within a three dimensional frame, as such the dividing steps for the cube of its volume, naturally can be in terms of the dimensions which are three number and these, that way shall be leading to three steps, the first being in terms of a single dimension, the second being in terms of a pair of dimensions and third being in terms of all the three dimensions.
43. Here it would be relevant to note that the volume of the cube permits simultaneous existence of 'interval, square and cube'.



44. Further it also would be relevant to not that interval is a structural set up of three components namely length and a pair of end points of the interval.

45. Square is a structural set up of 9 components namely (4 corner point, 4 sides and 1 area).
46. Cube is a structural set up of 27 components consisting of 8 corner points, 12 edges, 6 surfaces and 1 volume.
47. The artifices triple (3, 9, 27) permits re-organization as $(3^1, 3^2, 3^3)$.
48. This further permits re-organization as $[(1+2)^1, (1+2)^2, (1+2)^3]$
49. This organization format $[(1+2)^1, (1+2)^2, (1+2)^3]$ is a particular case of general organization format $(A+2)^n$, $n = 1, 2, 3$ and A to be any unit.
50. This way, the dividing of cube of its volume, shall be leading us to the geometric envelope for the format for manifestation of volume / domain of 3-space content.
51. The feature of geometric envelope of cube being of 26 components would bring into the format and feature of number 26.
52. Here it would be relevant to note that the numbers range 1 to 100 has precisely a range of 26 primes (including 1), namely (1, 2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31, 37, 41, 43, 47, 53, 59, 61, 67, 71, 73, 79, 83, 89 and 97).
53. The geometric envelope set up of 26 components and the range of 26 primes over the range of numbers up till 100, on their chase will help workout the parallel formats and features of geometric formats and artifices of numbers.
54. To have further insight about the insight of the format and features of the geometric envelope, one shall have a fresh visit of it.

55. It would come to attention that in each of the corner points of the cube is embedded a three dimensional frame of half dimensions.
56. It is this feature of the geometric envelope, which deserve to be chased further for its full comprehension and appreciation for imbibing its features and values to have thorough insight about it.

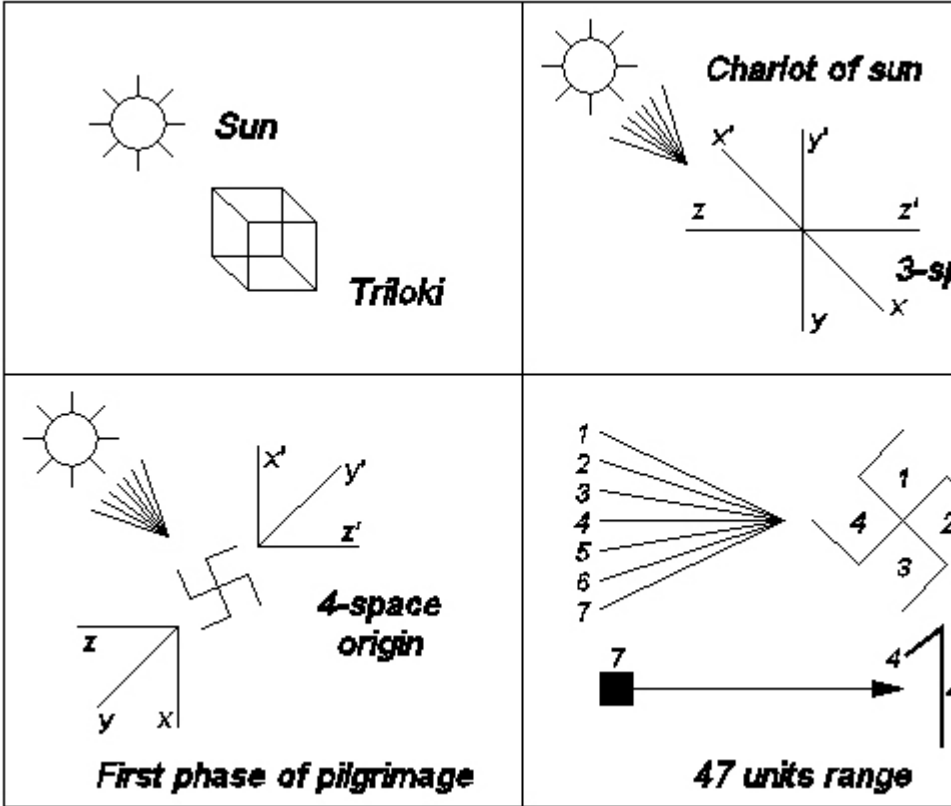
Exercises

- III. It would be blissful to go through the feature of ‘Trishapta (3 and 7) concept and format of Vedic Systems and to acquire insight about Vedic Systems approach to the set up of 3-space / 3-space content and 3-space bodies.
- IV. It further would be very blissful to revisit the structural set up of the cube, in the light of following structural features of this set up:

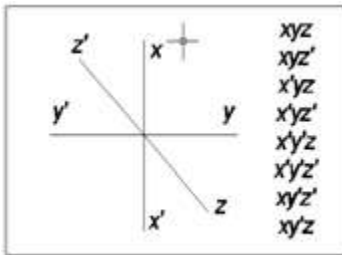
TRISHAPTA (3 AND 7)

“Yeh Trishapta Paryani Vishwa” (This world is enveloped by Trishapata i.e. 3 and 7). Parallel to it is that 3-space (☐) has 7 geometries of signatures (0, 1, 2, 3, 4, 5, 6) corresponding to the cube with no surface plate, cube with 1 Surface plate, cube with 2, 3, 4, 5 & 6 surface plates respectively

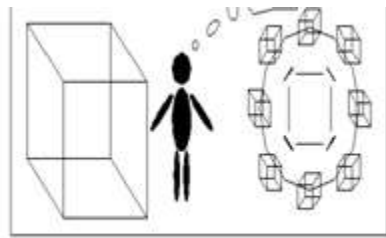
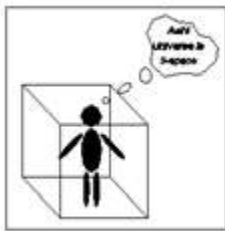
ORIGIN OF 3- SPACE (☉)



Things transform just with the attention at the origin. Let us have attention at the centre of cube / origin of 3-space (☉) and everything starts transforming; the cube splits into 8 sub-cubes and 3-space (☉) splits into 8 octaves. The origin accepts 8 sub-cubes / 8 octaves enveloping. The 4-space (☐) flourishes from within at the seat of origin and everything transforms from 3-space (☉) to 4-space (☐). This may be depicted and chased as pilgrimage on chariot of Sun driven by seven horses:



Interval	Square	Cube	Hypercube-4
—			



The eight octants cut and emergence of 4-Space at the origin may be further depicted as that with unfolding of the seal of the origin of 3-Space (⊕), the 3-Space (⊕) domain /Content would flow out and manifest as the boundary in a creator's space. That is as a boundary of hyper cube-4 .

Still further, this focus and attention at origin of 3-Space (⊕) would help transform and transit from the old mental block of working as if we are existing in 3-Space (⊕) to new format for working in 4-Space. This may be depicted as an expression of old mental block state prior to attention and focus upon the origin of 3-Space (⊕) and subsequent to transition and transformation to new format attained with attention and focus at the origin of 3-Space (⊕) as a seat of 4-Space.

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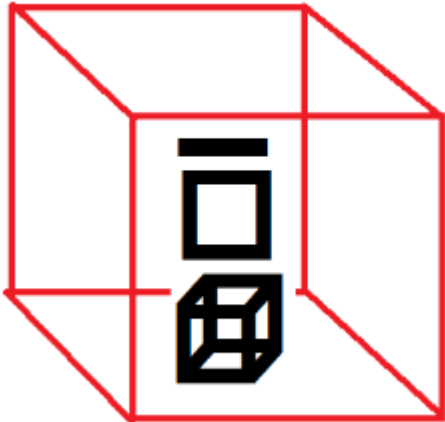



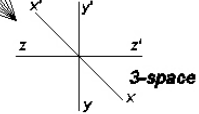


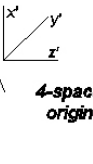
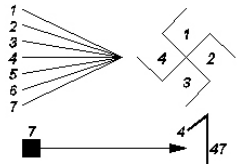



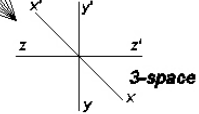


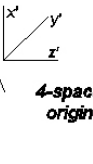
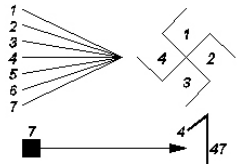



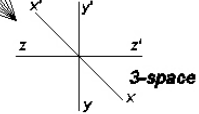


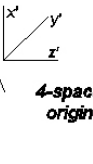
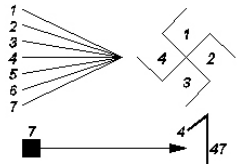
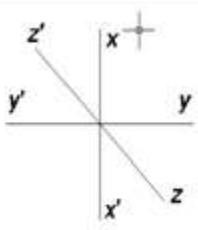


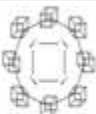
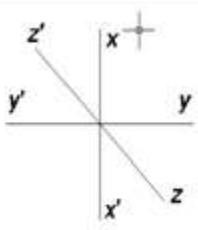


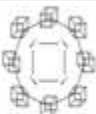


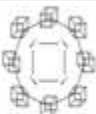
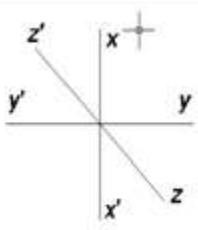


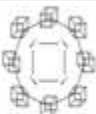


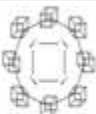


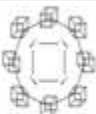
Technical terms

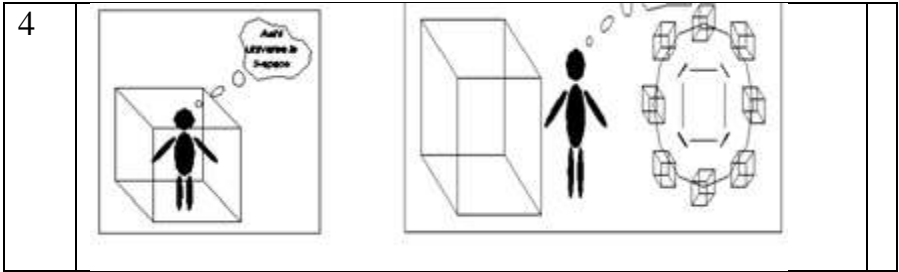
17. Geometric envelope

- 18.** The structural set up of cube
- 19.** corner points
- 20.** edges
- 21.** surfaces
- 22.** volumme
- 23.** axes
- 24.** origin
- 74. structural components
- 75. domain part.
- 76. geometric envelope for the domain
- 77. devoid of length
- 78. devoid of length, breadth
- 79. devoid of length, breadth and height
- 80. devoid of volumme.
- 81. Single dimensions
- 82. Pair of dimensions
- 83. All the three dimensions
- 84. interval, square and cube
- 85. end points
- 86. side of a Square
- 87. artifices of numbers
- 88. 26 primes
- 89. parallel formats
- 90. organization format
- 91. three dimensional frame of half dimensions.
- 92. 'Trishapta
- 93. Vedic Systems
- 94. 3-space content
- 95. 3-space bodies.
- 96. 8 sub cubes
- 97. 8 octants

98. 4-space (\mathbb{R}^4)

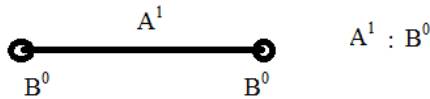
Figures

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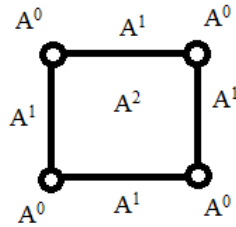
Lesson - 03
7 versions of cube (📐)

57. 'Cube (📐) 3-space has spatial (2-space) boundary'.
58. This statement means that 2-space content manifests and plays the role of boundary of 3-space bodies / solids / cube / sphere.
59. As point and lines are of 0-area as such the geometric envelope of cube (📐) is of 'spatial' feature.
60. This, that way makes us accept the boundary of cube (📐) being of 6 parts / 6 surface plates.
61. This is parallel to formulations $A^n : 2n B^{n-1}$; $n=3$, that is $A^3 : 6B^2$
62. Here it would be relevant to note that, in respect of 'interval'.



The formulations is the case value $n = 1$ for $A^n : 2nB^{n-1}$

63. Further in case of 'square' the formulation $A^n : 2nB^{n-1}$, $n=2$, leads to $A^2 : 4B^1$



64. The enveloped state of 'cube' within 'six surface plates', leads to seven versions of 'cube'; a range of cubes with (6, 5, 4, 3, 2, 1, 0) surface plates respectively.
65. This range of seven versions of cube may permit symbolize expression as :

Sn.	Versions	Number of plates
1	First	6 plates
2	Second	5 plates
3	Third	4 plates
4	Fourth	3 plates
5	Fifth	2 plates
6	Sixth	1 plates
7	Seventh	No plate

66. One way to designate these versions would be to 'accept' the presence of surface plates being their signatures as a marks of their presence.
67. In this light, the range of seven versions of cube, may be accepted as the versions of 6 signatures, 5 signatures, 4 signatures, 3 signatures, 2 signatures, 1 signature and 0 signatures (no signature).
68. In short, this range of seven versions of cube may be expressed/ represented and accepted as: 6S, 5S, 4S, 3S, 2S, 1S & 0S.
69. Another way to have this range being of organization features for set up of seven artifices range i.e (1, 2, 3, 4, 5, 6, 7)_ permitting re-organization as:

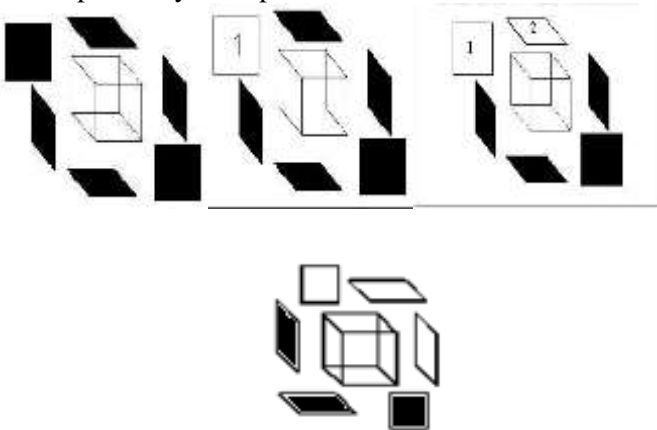
0	1	2	3	4	5
6					
1	2	3	4	5	6
7					
-3	-2	-1	0	1	2
3					

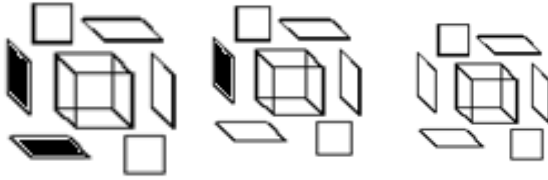
70. This organization for 7 versions of cube, may be taken as a set up fo
 (-3) signatures, (-2) Signature,
 (-1) signature, (0) signature,
 (1) signature (2) signature
 (3) signature version of cube
71. Here it may be taken by way of definition that 3-space accepts 7 geometrics and 7 versions of cube are 7 geometric bodies of the 7 geometries of 3-space.

72. Also it may, as will be taken by way definition that the range of 7 geometries of 3-space are 7 geometries of (-3, -2, -1, 0, 1, 2, 3) signatures.
73. These, accordingly may be represented as

Sn.	Geometry	Signature
1	-3 G3	(-3) Signature
2	-2 G3	(-2) Signature
3	-1 G3	(-1) Signature
4	0 G3	(0) Signature
5	1 G3	(1) Signature
6	2 G3	(2) Signature
7	3 G3	(3) Signature

74. Symbolically 7 versions of cube as bodies of 7 geometries of 3-space may be depicted as under:





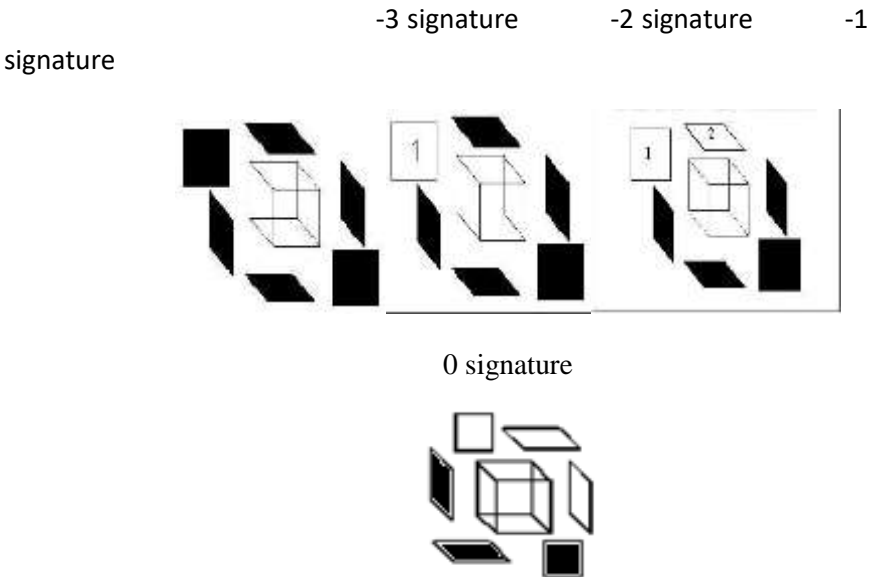
75. The division of spatial boundary consisting of 6 components (surface plates) permits re-organization as a set of pair of triple surface plates.
76. With it, the first set of triple plates and second set of triple plates, leads to organization feature in terms of which 0 signature geometry / version with 0 number of plates, comes at middle placement of the range of geometries.
77. With it, sequential addition of 1, 2 and 3 surface plates to 0 signature geometry shall be leading to geometries of signature 1, 2 and 3 respectively.
78. Likewise, the peeling of single, double and triple surface plates from the cube, shall be leading to (-3, -2 and -1) signature geometries / versions of cube.
79. These features together shall be bringing cube with 3 surface plates at the center of the organization.

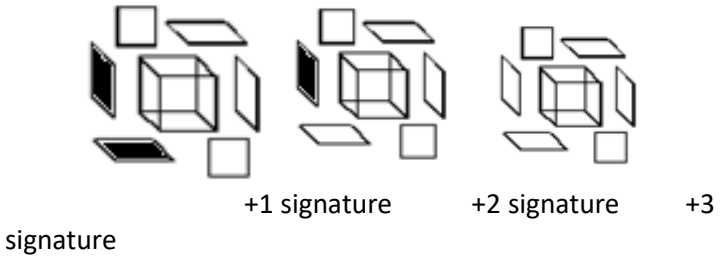


80. It shall be of middle placement of the range.
81. One may have a pause here and take note that this is a unique set up which can be looked at having three surface plates and also at the same time it can

be looked at as there being an absence of three surface plates.

82. It is this dual status of this version of cube / and geometry, which deserves to be comprehended well and to be appreciated fully for complete imbibing of its features to attain through insight about the organization of 7 geometries range of 3-space (-3, -2, -1, 0, 1, 2, 3), as per which the above version of cube with surface plates intact and three surface plates being absent, having middle placement and also accepting designation of zero signature geometry (body).
83. Accordingly the range of 7 geometries of 3-space and parallel to it the range of 7 versions of hyper cube 3 shall be of following sequential arrangement for their placements.



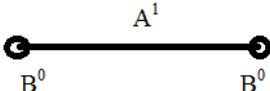
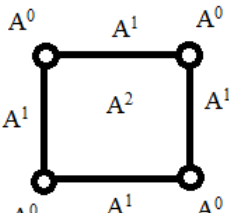
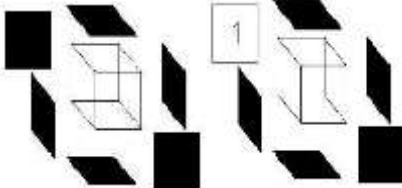
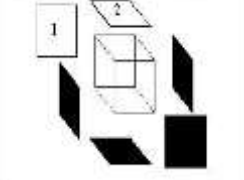



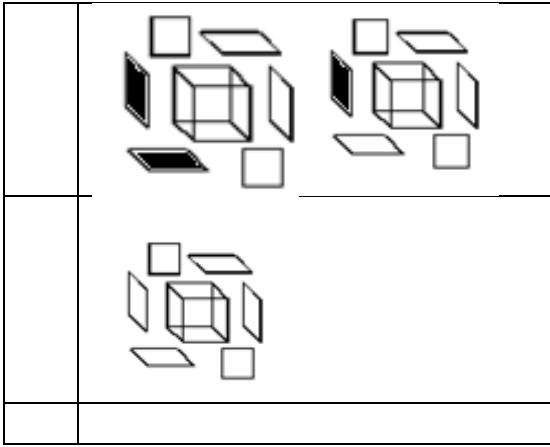
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Technical terms


15. 7 versions of cube
16. spatial boundary'.
17. 2-space content.
18. zero area point
19. six surface plates.
20. 'interval'.
21. 'square'
22. signatures as mark of presence
23. 7 geometrics of 3-space
24. First set of triple plates
25. Second set of triple plates .
26. dual status
27. zero signature geometry
28. middle placement geometry


Figure

Sn.	Figure
1	 $A^1 : B^0$
2	
3	
	
	



Lesson - 04
Eight octant cut of 3-space

64. Let us revisit the set up of cube ()

65. It has eight corner points. 

66. In each of eight corner points is embedded a three dimensional frame of half dimensions.

<p>SN.</p> <p>1</p>	
<p>2</p>	
<p>3</p>	

4	
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<p>SN.</p> <p>5</p>	
<p>6</p>	
<p>7</p>	

8	
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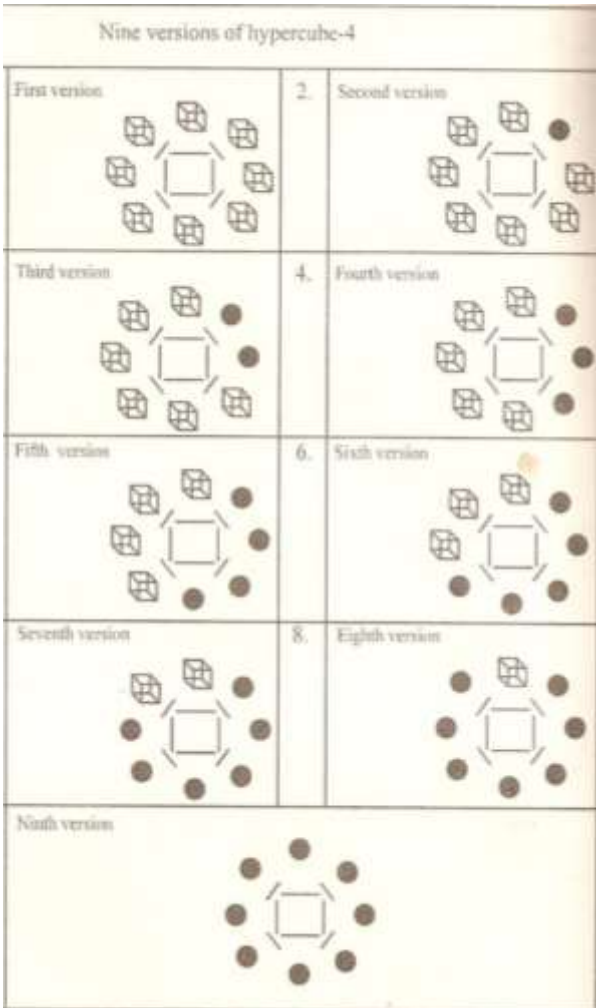
67. Let us again revisit the set up of the edges of the cube.
68. Each edge of the cube accepts a synthetic joint at its middle because of a pair of dimensions of pair of end points (corner points).

69. One may have a pause here and take note that $8 \times 3 = 24$ half dimensions of three dimensional frames of all the eight corner points together synthesize 12 edges with each edge being a synthetic set up of a pair of half dimensions, and that way making each edge a set up of a full dimension.
70. This set up of edges, four in number framing surface plate of the cube shall be bringing us face to face with the organization feature permitting split of the surface plate in four quarters.
71. One may further have a pause here and take note that each edge of the cube is the edge of a pair of surface plates.
72. This feature of the edge will further brings to focus that each point of the edge is the origin point of a two dimensional frame of half dimensions.
73. One may further have a pause here and take note that while each point of the edge is the origin of a two dimensional frame of half dimensions but the end points (corner points of the edge are the origin points of three dimensional frames of half dimensions).
74. One may further have a pause here and take note that as the cube would be of a diminishing volume, the same ultimately would reach a phase and stage of collapse of eight corner points at center of the cube and in the process the whole range of in between points of the edges as well would have a simultaneous merger with the corner points and a collapse at the center.
75. It is this feature of the merger of in between points of the edges with the corner points of edges will also brings to focus as to how the origin of a two

dimensional frame transits and transforms into origin of a three dimensional frame, and a step ahead into the origin of four dimensional frame and thereby would come to focus the feature of compactification of origins at middle point of line / center of square / origin of cube and so on.

76. It is the feature of compactification Phenomenon at the origin which is responsible for the split of cube into 8 sub cubes and parallel to it there being a cut of 3-space into 8 octants.
77. One shall chase this split of cube into 8 sub cubes and parallel to it the split of 3-space into 8 octants to properly comprehend and to appreciate the features of this organizational set up.
78. One way to chase it would be to cut the soap cake with knife in three steps to make it of eight parts.
79. The other way would be to have eight soap cakes of equal sizes and to set them into a bigger soap cakes.
80. This set up of bigger soap cake of eight equal sub cakes shall be having internal meeting point for the internal corners of eight soap cakes.
81. One may have a pause here and take note that the internal corner of the soap cake is parallel to the origin of a three dimensional frame.
82. That way, it can be observed as that internal corners of eight soap cakes, as origin points of three dimensional frames are enveloping the center of bigger soap cakes.
83. One may have a pause here and take note that this set up, as such is of the format and features of 4-space as such a release of 4-space at origin of cube / 3-space enveloped within solid boundary of eight components, to be designated as hyper cube 4.

Symbolic representation		Structural aspect
full dimensions frame	half-dimensions frame	
		Origin of 3-space ● Origin
		Origin of 3-space 4-space
		Dimensional frame Swastik (卐)
		Dimensional frame 4-space
		Hypercube-4
		5-space as origin of 4-space



84. Let us have a fresh look at the set up of the cube again.

85. Cube is a set up of 27 components (8 corner points, 12 edges, 6 surfaces and 1 volume) and a three dimensional frame of 4 components (3 axes and 1 origin).

86. Cube as a set up of 27 components, when is joined surface to surface with another cube, 9 of the components (of the in between surface namely 4 corner points, 4 edges and 1 surface area) gets super imposed and thereby the combined set up becomes of $27 + (27-9) = 27 + 18 = 45$ components.
87. Now if another cube is joined along with other surface to make the second row, then this start with cube of second row would be of $(27-9) = 18$ components. When second cube is added to the second row it shall be contributing only $18 - 6 = 12$ components and thereby the total components of the second row of pair of cubes would be $18 + 12 = 30$.
88. Thereby the total components of both rows of 2 cubes each shall be together making out a set up of $45 + 30 = 75$ components in all.
89. Now if the second storey is built upon this base storey of four cubes of a pair of paired cubes (4 cubes as a set up of a pair of rows as above of 75 components) then
- (iv) The first row of the second storey shall be a set up of 18 components and the second cube of the said first row of second storey would be of 12 components and thereby the first row of second storey shall be contributing $18 + 12 = 30$ components.
 - (v) The first member of the second row of second storey would be a set up of 12 components. However second member of the second row of the second storey would be of $12 - 4 = 8$ components and thereby the second row of second storey would be set up of $12 + 8 = 20$ components in all.

- (vi) This way the total components of both the rows of second storey would be $30 + 20 = 50$ components.
90. With it the structural set up of both the stories of pair of rows each of pair of cubes would be $(45 + 30) + (30 + 20) = 125 = 5 \times 5 \times 5$.
91. Here it would be relevant to note that the set up of eight cubes (as above) is parallel to eight octants cut of the cube.
92. As such eight octants set up (2^3) leads to $125 = 5^3$ components set up.
93. It would be a blissful exercise to note that 3^3 sub cubes set up of the cube shall be leading to 7^3 components.
94. It would further be a blissful exercise to note that to workout n^3 sub cubes split of cube as a set up of $(2n + 1)^3$ structural set up.
95. Here it would be relevant to note that n-space accepts $(2n + 1)$ geometries range


*

Technical terms



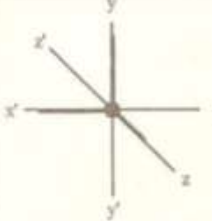

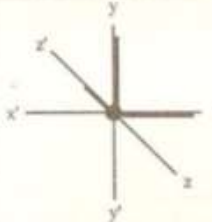
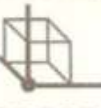
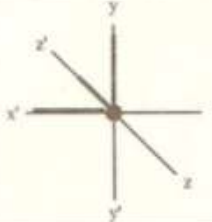

96. *Eight octant*
97. *cut of 3-space*
98. corner points
99. three dimensional frame of half dimensions.
100. edges
101. synthetic joint at its middle of the edge
102. half dimensions
103. synthetic set up of a pair of half dimensions
104. full dimension.
105. four quarters.

- 106. Split of surface plates
- 107. point of the edge as origin three dimensional frame
- 108. each point of edge is origin of a two dimensional frame
- 109. collapse of corner points
- 110. compactification of origins
- 111. compactification Phenomenon
- 112. internal corner point of sub cubes
- 113. release of 4-space at origin of 3-space

Figure

Sn.	Figure	
1		



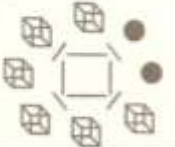
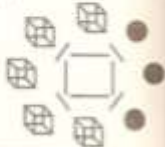
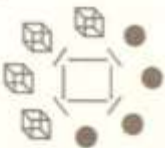

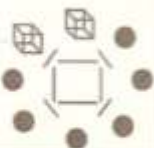
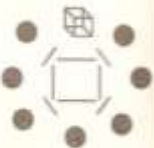

2		

3	 <p>A 3D Cartesian coordinate system with three axes: a vertical y-axis, a horizontal x-axis, and a diagonal z-axis. A second set of axes, x', y', z', is shown, where x' is horizontal, y' is vertical, and z' is diagonal.</p>	 <p>A 3D wireframe cube with a red dot on the vertical z-axis.</p>	
 <p>A 3D Cartesian coordinate system with three axes: a vertical y-axis, a horizontal x-axis, and a diagonal z-axis. A second set of axes, x', y', z', is shown, where x' is horizontal, y' is vertical, and z' is diagonal.</p>	 <p>A 3D wireframe cube with a red dot on the horizontal x-axis.</p>		
 <p>A 3D Cartesian coordinate system with three axes: a vertical y-axis, a horizontal x-axis, and a diagonal z-axis. A second set of axes, x', y', z', is shown, where x' is horizontal, y' is vertical, and z' is diagonal.</p>	 <p>A 3D wireframe cube with a red dot on the vertical y-axis.</p>		
 <p>A 3D Cartesian coordinate system with three axes: a vertical y-axis, a horizontal x-axis, and a diagonal z-axis. A second set of axes, x', y', z', is shown, where x' is horizontal, y' is vertical, and z' is diagonal.</p>	 <p>A 3D wireframe cube with a red dot on the horizontal x'-axis.</p>		

4	Symbolic representation		Structural aspect
	full dimension frame	half-dimension frame	
			Origin of 3-space ● Origin
			Origin of 3-space 4-space
			Dimensional frame Swastik (卐)
			Dimensional frame 4-space
			Hypercube-4
		5-space as origin of 4-space	

5

Nine versions of hypercube-4

<p>First version</p> 	<p>2.</p>	<p>Second version</p> 
<p>Third version</p> 	<p>4.</p>	<p>Fourth version</p> 
<p>Fifth version</p> 	<p>6.</p>	<p>Sixth version</p> 
<p>Seventh version</p> 	<p>8.</p>	<p>Eighth version</p> 
<p>Ninth version</p> 		

Lesson - 05
Nine points fixation of a cube (ॐ)

I

Conceptual theme

24. Aim is to approach the set up of ‘cube (ॐ)’, in its fixed stage.
25. Fixed states means, a state in which the structural set up of the body (here cube) remains integrated whole as wholesome unit.

II

Technical terms

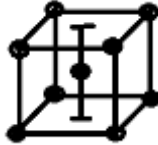
26. Technical terms here are about the different components of the set up of the cube.
27. It would be a blissful exercise to tabulate these terms appearing in the text of the lesson.
28. Further, it also would be a blissful exercise to include these terms in Dictionary being attempted by the readers.
29. The conceptual base and other features of these terms as well to be included in the explanatory notes in the Dictionary beneath these entries of the dictionary.

III

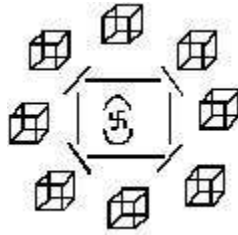
Overview of the information

30. Overview of the information surfacing in the text of the lessons as well be drawn as an exercise of evaluation of the one's own comprehension of the lesson and appreciation of the emerging values of the lesson.
31. This overview is not only a summary of the lesson but it also is a projection of its inter-relationship with the previous lessons as well as about what is to follow the present lesson.
32. As such reaching at overview of the information of the lesson would be a complete index of understanding and imbibing of the values of the lesson and of insight of the virtues of the values learnt while being through the lesson.

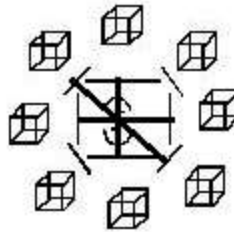
IV
Main lesson – 5
Nine points fixation of cube (☞)



33. Let us have a fresh look at the set up of cube (☞).
34. It permits its fixation of in terms of eight corner points and ninth centre.
35. Middle points of 12 edges together with centres of 6 surface plates of cube make out 18 points which along with above 9 point (8 corner points and 1 centre) make out a set up of 27 points parallel to 27 components set-up of cube, namely, 8 corner points, 12 edges, 6 surfaces and 1 volume of cube.
36. This set up of 27 points also goes parallel to 9 three dimensional frames areas ($9 \times 3 = 27$ in number), 8 of which are embedded in 8 corner points of cube and ninth three dimensional frame being fixed in centre of cube.
37. This set of 9 three dimensional frames, themselves have their fixation in their respective origins (4-space seats).
38. One may have a pause here and take note that hyper cube 4 accepts 9 versions.
39. It would further be relevant to not that hyper cube 4 has solid boundary of 8 components.



40. Still further, it would be blissful to note that 4-space is a spatial order space (2-space plays role of dimension and 4 spatial dimensions constitute its dimensional frame and 5-space, which is of solid order (3-space in role of dimension) plays as role of origin of 4-space.



41. The spatial order (2-space as dimension) leads to spatial measures (2 as 1 and 1 as 2).
42. It is this feature which deserve to be comprehended well and to be appreciated completely for its full imbibing to have through insight about it.
43. The 8 solid boundary components of 4-space are of linear order. It, as such, would help us appreciate as that $8 = 2^3 = 2 \times 2 \times 2$.
44. And further in each corner point of cube is imbedded a three dimensional frame of half dimensions.
45. Then at center of hyper cube 4 is a synthesis of a pair of three dimensional frames of half dimensions as a three dimensional frame of half dimension.

46. Let us again have a pause and view cube (☐) as a set up of placement of 8 corner points at centers of 8 sub cubes of bigger cube synthesized by those 8 sub cubes.
47. Let us revisit the above set up.
48. Let us chase it gently in a sequential steps.
49. Let us take a cube, to be designated as a given cube (☐) (in short G.C)
50. GC is having eight corner points to be named as GCC 1, 2, 3, 4, 5, 6, 7, 8.
51. Now let us have another synthesized cube (SC of eight sub cubes (SCC 1, 2, 3, 4, 5, 6, 7, 8).
52. Let us have a pause here and chase placement of eight corner points GC 1, 2, 3, 4, 5, 6, 7, 8 upon the centers of eight cube cubes of synthesized cube.
53. Let us draw following tabulation for comprehensive view of above placements.

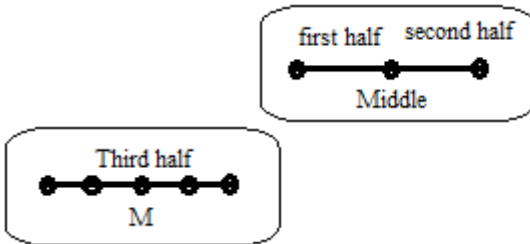
Sn.	Corner of GC	Center of Sub cube of SC
1	GCC 1	Center of SC.SC - 1
2	GCC 2	SC.SC – 2
3	GCC 3	SC.SC – 3
4	GCC 4	SC.SC – 4
5	GCC 5	SC.SC – 5
6	GCC 6	SC.SC – 6

7	GCC 7	SC.SC – 7
8	GCC 8	SC.SC – 8

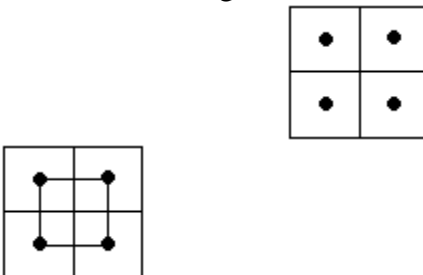
54. Let us again have a pause and have a fresh look at the above set up.
55. It would be bringing to focus that with given cube (GC) is associated a synthetic cube SC.
56. Further it also comes to notice that the given cube, with its unique placements makes the given cube of the format and features of sub cube of synthetic cube itself.
57. Given cube becomes of the format and features of an octant / one of the eight sub cubes set up of the cube.
58. The given cube, in the circumstances, is the ninth sub cube of octant format.
59. This 9th sub cube, that way firmly integrates and fixes the synthetic setup of the synthetic cube.
60. This as such would help us comprehend and to appreciate that while the 'given cube', would be in a motion in this space, along with it would be in motion that way the synthetic cube as well would remain in integrated state even while being in a dynamic state.
61. It is this feature of 9 point fixation, which deserves to be comprehended well for its thorough appreciation and full imbibing to have complete insight about this feature of the set up of the cube.
62. In the context, one may revisit the set up of the square permitting split into four quarters squares and fifth

quarter square having placement of its corner points at the centers of the four quarters of the square.

63. A step ahead, the split of an interval into a pair of halves shall be leading to a third half with its end points at the middle points at the pair of halves of the original interval.
64. A recapitulation as that the pair of halves of an interval stand integrated in terms of third half with end points at middles of the pair of halves of the interval.



65. And further four quarters of square are integrated in terms of fifth quarter square with its four corner points having placement at the centers of the four quarters of the square. And still ahead, eight octants of 3-space / eight sub cube of cube remain integrated in terms of 9th sub cubes with its corner points having placement at the centers of eight sub cubes of the main cube.



66. These artifices triples (3, 5, 9), a step ahead shall be leading us to artifice 17 and thereby making a

- quadruple artifices set up (3, 5, 9, 17) in reference to quadruple artifices (2, 4, 8, 16).
67. One may have a pause here and take note that $(5-3) = 2$, $(9-5) = 4$ and $17-9=8$.
68. The artifices triple (2, 4, 8) permit re-organization as $2^1, 2^2, 2^3$.
69. One may further have a pause here and take note that number 1 as range 1 has only 1 arrangement for value 1, namely $1 = 1$.
70. The number 2 as range (1, 2) has a pair of arrangements for value 2 as (i) $2 = 2$ and (ii) $2 = 1 + 1$.
71. A step ahead number 3 has four arrangements for value 3, namely (i) $3= 3$ (ii) $3 = 1 + 2$ (iii) $3 = 2 + 1$ and (iv) $3= 1 + 1 + 1$.
72. A step further ahead number 4 as range (1, 2, 3, 4) has eight arrangements of value 4, namely (i) $4 = 4$ (ii) $4 = 1 + 3$ (iii) $4 = 3 + 1$ (iv) $4 = 2 + 2$ (v) $4 = 1 + 1 + 2$ (vi) $4 = 1 + 2 + 1$ (vii) $4 = 2 + 1 + 1$ (viii) $4= 1 + 1 + 1+1$.
73. One may have a pause here and revisit the set ups of interval, square, cube and hyper cube 4 on the one hand and numbers 1, 2, 3 and 4 on the other hand and to glimpse the parallel formats and features of artifices of numbers and format of dimensional bodies.

V

Objective type questions and answers

74. In the light of above text of lesson, we can enlist objective type questions with answers.

VI

Small answer questions

75. Further in the light of the text, we can enlist small answers requirement to questions.

VII

Conceptual exercises

76. Also conceptual exercises can be coined for proper evaluation of the comprehension of the lesson.

VIII

Table of figures

77. Also table of figures may be drawn to facilitate the conceptual comprehensions of the lesson.

IX

The steps to reach at the text of lessons

78. Present stage is the first stage in which broader outline of the lesson has been drawn.
79. In next phases, attempt would be made to settle and finalize the text.


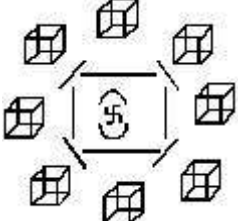
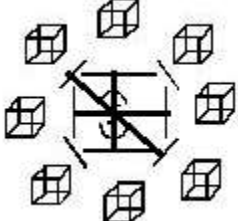
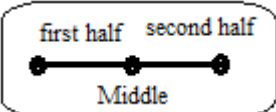
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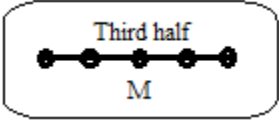
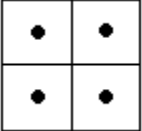
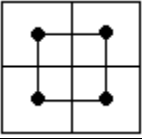
Technical terms

1. *Nine points fixation of a cube*
2. Fixed states
3. wholesome unit.
4. Middle points of edges
5. centres of surfaces
6. ninth three dimensional frame
7. hyper cube 4
8. 9 versions of hyper cube 4.
9. Spatial order
10. four spatial dimensions.
11. 8 solid boundary components
12. linear order
13. Pair of three dimensional frames of half dimensions
14. centers of 8 sub cubes
15. cube synthesized as 8 sub cubes.
16. synthetic cube

- 17. ninth sub cube.
- 18. dynamic state.
- 19. fifth quarter square
- 20. third half of interval
- 21. artifices of numbers
- 22. dimensional bodies.

Figure

Sn.	Figure
1	
	
	
	

Lesson - 06

Ten Directional frame

114. Let us revisit the set up of cube.
115. Let us be face to face with volume (space) enveloped within boundary set up (of 26 components)
116. The geometric envelope of cube, as such be designated as external set ups.
117. The volume (space) enveloped within may be designated as 'internal setup.
118. This internal space (volume) set up, amongst others, shall be having following glaring features:
- (i) It accepts a three dimensional frame with origin super imposed upon center of the cube.
 - (ii) There is a set up of four internal diagonals
 - (iii) It accepts a split of eight octants formats.
 - (iv) It also accepts a ten directional frame.
119. The ten directional frame amounts to a format for flow of 'ions' directed along ten directions from the origin of 3-space / center of cube, which is a seat of 4-space / creator's space (4-space).
120. Ten directional frame as ten streams flow format for ions from creator's space (4-space) is the feature which deserve to be comprehended well for its complete appreciation to have full imbibing thereof for through insight about it.
121. This ions flow format from origin / center / seat of creator's space (4-space) would be parallel to

manifestation of creative boundary of ten components of transcendental (5-space) domain compactified at base of the origin / center / seat of creator's space (4-space)

122. This Phenomenon would be of format parallel to ascendance of solid order from within spatial order creator's space (4-space) and thereby there being a linear order solid boundary of creator's space (4-space) manifesting because of split of 3space domain (volume) along eight octant format of 3-space.
123. One may have a pause here and take note that and permit the transcending mind to be face to face with this happening.
124. One shall permit the transcending mind to continuously remain in prolonged sitting of trans and to glimpse the Phenomenon of transition and transformation for the role of 3-space content as domain fold into 3-space content being in the role of solid dimensional order of transcendental (5-space) domain
125. One shall visit and revisit this Phenomenon time and again till one has a complete comprehension of the same.
126. One may have a pause here and take note that this transition and transformation Phenomenon is having dimensional synthesis Phenomenon at work.
127. As a result, a pair o linear dimension and pair of solid dimensional order synthesize transcendental (5-space) order.
128. It is this reach of solid domain (volume) which deserve to be chased time and again to be parallel with Vedic Systems of Triloki being sustained by Trimurti.

*

Technical terms

1. *Ten Directional frame*
2. volume
3. space within boundary
4. geometric envelope of cube
5. external set ups of cube
6. internal set ups of cube
7. three dimensional frame with
8. four internal diagonals
9. eight octants formats
10. ions flow from center
11. ascendance of solid order
12. transition and transformation of role of 3-space
13. dimensional synthesis Phenomenon at work.
14. pair o linear dimensions
15. pair of solid dimensions
16. transcendental (5-space) order.
17. Triloki sustained by Trimurti

Second Semester

Introductory

1. During one semester we have learnt about 3-space in terms of cube as its representative regular body.
2. This study brings to focus the role of a three dimensional frame settling the manifestation format of cube in particular and 3-space bodies (solids) as set ups of linear dimensional order.
3. The manifestation format, as such is of four folds being designated as dimension fold, boundary fold, domain fold and origin fold.
4. Further it also comes to pointed attention that dimension fold of 3-space bodies is of linear order, which in other worlds would mean that 1-space plays the role of dimension.
5. It may be taken as that 1-space content manifests and plays the role of dimension of solids / 3-space bodies, in general at cube in particular.
6. Further as that solids (3-space bodies in general) and cube and sphere in particular are accepting spatial boundary, i.e., 2-space plays the role of boundary fold of 3-space bodies. In other worlds 2-space content manifests and plays the role of boundary of 3-space bodies.

7. Still further, 3-space content manifests as domain folds of solids / 3-space bodies in general and cube and sphere in particular.
8. 4-space content manifests and plays the role of origin of 3-space bodies.
9. This manifestation format of four folds is designated and is known as hyper cubes format.
10. The manifestation of 3-space content as domain fold as along this format makes solids in general and cube in particular as of hyper cube 3 format.
11. Such manifestation brings to prime role a three dimensional frame.
12. This three dimensional frame is a set up of four components, namely, three linear axes (dimensions and fourth origin).
13. Of these three dimensions (axes, every single dimension, axis) provides a format for manifestation of intervals.
14. Further, each pair of dimensions provide format for manifestation of squares.
15. And all the three dimensions (axes) together provide a format for manifestation of domain folds of solids in general and cube and sphere in particular.
16. Each dimension axes is of infinite length.
17. These three dimensions (axes) are synthesized with origin as their common joint.
18. It is this feature of the common joint (origin), which splits each dimension (axes) into a pair of parts, called half dimensions (axes).

19. Pair of axes split as quadruple half dimensions and synthesize a two dimensional frame.
20. The split of three dimensions as a set of six half dimensions permit re-organization as a pair of three dimensional frames of half dimensions.
21. This re-organization makes the set up for three dimensional frame as of seven components, namely a set up of six half dimensions and seventh origin.
22. One of the feature of this organization comes to be that origin accepts a middle position.
23. During first semester we have also learnt that cube accepts seven versions.
24. Of these seven versions of cube, the middle placement version is of unique features, as much as that it has its three surface plates intact and three surface plates being absent.
25. It is this split of the spatial boundary of cube into a pair of halves of three surface plates each, which brings to focus the role of spatial dimensional order of 4-space at origin of three dimensional frame playing its role.
26. During this semester we shall be learning as to how the placement of a three dimensional frame with super imposition of its origin upon center of the cube shall be as a starting point, would sequentially lead to the manifestation of the organization format of 16 Ganita Sutras and 13 Ganita Upsutras with sole syllable Om (ॐ) as the starting point and its synonym Parnava प्रणव as its

end reach and thereby there being a full coverage range of artifice value 31 parallel to 31 components range of the set up of cube.

27. During this semester we shall be learning lessons no 7 to 12:

Chapter 7 Hyper cube 3 format

Chapter 8 Zero signature geometry format as the starting point for Ganita Sutras format

Chapter 9 Three place value system

Chapter 10 Different roles of 3-space

Chapter 11 Cube and Sphere

Chapter 12 Triloki and Trimurti

*

Lesson - 07

Hyper cube 3 format

129. Ganita Sutras (and Upsutras) organization helps settle hyper cubes format in general and hyper cube 3 format in particular.
130. Simultaneously hyper cubes format in general and hyper cube 3 format in particular helps settle the organization format of Ganita Sutras (and Upsutras).
131. The Ganita Sutras and (Ganita Upsutras) constitute a complete vedic scripture.

132. To be a complete Vedic scripture means that the scripture accepts sole syllable Om (ॐ) as its source reservoir and its synonym *Parnava* ऋणव as its End Reach
133. Ganita Sutras text, as such presumes the existence and definition of one and starts unfolding organization format with Ganita Sutra 1 itself.
134. This presumption of Existence and definition of '1' is there because of availability of these source values in the whole some formulation 'ॐ', which is of four components designated and known as 'bindu sarovar, ardh matra, tripundam and Swastik pada and same is parallel to the format of idol of Lord Brahma, creator the supreme and that way is still further parallel to the format of hyper cube 4 in particular and hyper cubes in general.
135. With it, the chase of Ganita Sutra 1 with its working rule 'one more than before', shall be providing us 'sequential order', in general and 'linear order' in particular
136. One may have a pause here and take note that this working rule, in its generality and in its special and particular applications shall be bringing us face to face with :
- (xv) 1, 2, 3, 4, 5, ---
- (xvi) First, Second, Third, Fourth, Fifth, ---
- (xvii) 1, (1, 2), (1, 2, 3), (1, 2, 3, 4), ---
- (xviii) First Degree, Second degree, third degree, fourth degree, ---
- (xix) Interval, square, cube, hyper cube 4, hyper cube 5, ---
- (xx) 1-space, 2-space, 3-space, 4-space, ----

- (xxi) 1-space content, 2-space content, 3-space content, 4-space content, ---
 - (xxii) Hyper cube 1, Hyper cube 2, Hyper cube 3, Hyper cube 4, ---
 - (xxiii) $N^0, N^1, N^2, N^3, \dots$
 - (xxiv) One dimensional frame, two dimensional frame, three dimensional frame, four dimensional frame, ---
 - (xxv) 1-space as origin of 0-space, 2-space as origin of 1-space, 3-space as origin of 2-space, 4-space as origin of 3-space, ---
 - (xxvi) 0-space as boundary of 1-space, 1-space as boundary of 2-space, 2-space as boundary of 3-space, 3-space as boundary of 4-space, ---
 - (xxvii) 1-space boundary of 2 components, 2-space boundary of 4 components, 3-space boundary of 6 components, 4-space boundary of 8 components,---
 - (xxviii) Like that very large number of illustrative set ups can be cited, like matrix format 1, 1 x 1, 1x 1 x 1, 1x 1 x 1 x 1, ----; 1 x 1, 2 x 2, 3 x3, 4 x 4, 5 x 5 and so on; $1^3, 2^3, 3^3, 4^3$ and so on
137. Origin of 3-space at middle placement, origin of 4-space at middle placement, origin of 5-space at middle placement and parallel to it origin of three dimensional frame at middle placement, origin of 4 dimensional frame at middle placement, origin of five dimensional frame at middle placement and so on shall be leading us to different features of the organization format of Ganita Sutras.

138. The middle signature geometry of 3-space, the middle signature geometry of 4-space, middle signature geometry of 5-space and so on shall as starting point for Ganita Sutra 1 would be leading us to different pure and applied values of Ganita Sutras
139. Parallel to it, middle version i.e. fourth version of seven versions of cube as a starting point shall be providing us pure and applied values of Ganita Sutras as pure and applied values of the Discipline of VMS & T of 3-space.
140. Such start shall be sequentially leading us to:
- (viii) -1, 0, 1
 - (ix) -2, -1, 0, 1, 2
 - (x) -3, -2, -1, 0, 1, 2, 3
 - (xi) -4, -3, -2, -1, 0, 1, 2, 3, 4
 - (xii) -5, -4, -3, -2, -1, 0, 1, 2, 3, 4, 5
 - (xiii) -6, -5, -4, -3, -2, -1, 0, 1, 2, 3, 4, 5, 6
 - (xiv) -7, -6, -5, -4, -3, -2, -1, 0, 1, 2, 3, 4, 5, 6, 7
141. This way seven geometries range of 3-space / seven versions range of cube along both the dimensions of spatial order (2-space in the role of dimension of 4-space) with seat at origin of three dimensional frame, shall be firstly providing exhaustive coverage for Ganita Sutras 1 to 14) and 13 Ganita Upsutras of placements of gaps in between Ganita Sutras 1 to 14) and ahead there to be the format for pair of Ganita Sutras namely Ganita Sutras 15 and 16 to be of the format of sutras 1 and 2 respectively of Ashtadhey.
142. These features deserve to be visited and revisited and to be continue till their full comprehension

143. It is with comprehension and appreciation of these features that their values can be imbibed and insight can be had about their virtues.
144. It is with this imbibing and insight that the format working rule of Ganita Sutras can be availed for progressive evaluation of intelligence field within young minds.
145. A step ahead consciousness field and emerging enlightenment as well can be made lively within the intelligence field.

*

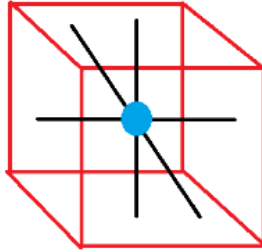
Lesson - 08

Zero signature geometry format as the
starting point for Ganita Sutras format

1. Seven geometries range and parallel seven signatures range (-3, -2, -1, 0, 1, 2, 3) has zero signature geometry at its middle placement\
2. This middle placement geometry and parallel to it middle placement version of cube with three surface plates intact (and three absent plates) is to provide us starting point.



3. This placement with origin of three dimensional frame super imposed upon the center of the cube shall be formatting the three dimensional frame for its split into a pair of three dimensional frames of half dimensions.
4. Such formatting would be there because of the origin of the three dimensional frame being of a spatial order (2-space in the role of dimension) of 4-space at origin of three dimensional frame.



5. Here it would be relevant to note that $4 = 2 + 2 = 2 \times 2 = (-2) \times (-2)$
6. These feature are parallel to super imposition of addition and multiplication.
7. Further it also would be parallel to super imposition of negative and positive orientations.
8. With split of three dimensional frame into a pair of three dimensional frames because of release of 4-space as the origin, the super imposition feature as well would get lifted upon the set up.
9. With it, three dimensions as well would get released for their sequential organization as first dimension, the pair of dimensions and all the three dimensions as values 1, 2, 3 as per the working rule '1', one more than before '1 +1' and a step in continuity as $\{(1+1) + 1\}$.
10. One may have a pause here and take note that that as the pair of three dimensional frames (half dimensions) are of opposite orientations, as such, towards second three dimensional frames of half dimensions, there would be values triple (-1, -2, -3)
11. The emerging 7 steps long values range (-3, -2, -1, 0, 1, 2, 3) would be available along both axes of the spatial order (2-space as dimension)

12. The above organization shall be leading to coverage range of $7 + 7 = 14$ steps, which would be parallel to 14 steps organization of Ganita Sutras 1 to 14
13. The release of spatial order 4-space at the origin and the super imposition features $4 = 2 + 2 = 2 \times 2$, shall be coming into play of their distinct roles with the release of transcendental (5-space) origin of creator's space (4-space)
14. With it the Ganita Sutras range 1 to 16 would be complete.
15. Further simultaneously, the Ganita Sutras range along with Ganita Upsutras as well would be completed with Ganita Uputras 1 to 13 having their placements in the sequential gaps of Ganita Sutras 1 to 14.
16. The complete range is of $16 + 13 = 29$ steps, which is parallel to 29 archiks of Samved, 29 Sutras shalokas of chapter 5 of Shrimad Bhagwad Geeta and 29 shalokas (and Ardh Shalokas) of chapter 13 of Shrimad Durga Saptasati
17. One may have a pause here and take note that the split of three dimensional frame into a pair of three dimensional frames of half dimensions amounts to a release of spatial order 4-space at origin of three dimensional frame
18. It would further be relevant to note that the spatial order of 4-space splits creative (4-space domain) into a pair of domains, being designated as a pair of hemispheres
19. It still further be recapitulated that the split of creative 4-space domain into a pair of hemispheres amounts to release of solid dimensional order transcendental (5-space) domain

20. This release of solid order transcendental (5-space) domain within creator's space (4-space) amounts to transcendence from the spatial order itself
21. It is this release of solid order from spatial order amounts to a reach within the space outside universe of creative dimensional order
22. This sequential release of 4, 5 and 6 space at the origin of three dimensional frame / origin of 3-space deserve to be chased to have full comprehension of the pure and applied values of the organization format of Ganita Sutras being chased with zero signature geometries of 3, 4, 5 and 6 spaces respectively as the starting points.
23. Starting with zero signature geometry at 3-space, there would be chase of linear order format for the organization of Ganita Sutras. It in a way would be parallel to the working rule of Ganita Sutra 1.
24. The starting with zero signature geometry of 4-space would be chased of Ganita Sutras in terms of spatial order parallel to the working rule of Ganita Sutra 2.
25. The starting with zero signature geometry of 5-space would be chased of Ganita Sutras in terms of solid order parallel to the working rule of Ganita Sutra 3.
26. And the starting with zero signature geometry of 6-space would be chased of Ganita Sutras in terms of hyper solid order parallel to the working rule of Ganita Sutra 4.
27. Transcendental (5-space) order approach would be the conclusive reach for the organization format of Ganita Sutras for their values and virtues.

Outline of lessons 9, 10, 11 & 12

Chapter 9 Three place value system

1. Ganita Sutra 2 settle the format of place values systems..
2. This format is settled in terms of the range of numerals of the place value systems.
3. Ganita Sutras 1 and 2 together with Ganita Upsutras 1 and 2 lay foundation for settlement of whole range of place value systems.
4. The working rule of Ganita Sutra 2 'all from 9 and last from 10', is specifying the operational rule of ten place value system.
5. Ganita Upsutra - 1 with working rule of 'proportionately / symmetry' / follow the form as it is.
6. Lay the foundation for whole range of place value systems.
7. Illustratively, in case 9 placement value format is to be settled, then parallel to 9 numerals range (1, 2, 3, 4, 5, 6, 7, 8, 9) of ten place value system, this range is to be of eight numerals (1, 2, 3, 4, 5, 6, 7, 8) for 9 place value system.
8. Like that in case of three place value system numerals range would be (1, 2) only.
9. The double digit numbers expression format for ten place value system would be of 9×11 grid / matrix format:

Table of ten Place value system

01	02	03	04	05	06	07	08	09			
10	11	12	13	14	15	16	17	18	19	20	21
22	23	24	25	26	27						
28	29	30	31	32	33	34	35	36	37	38	39
40	41	42	43	44	45	46	47	48	49	50	51
52	53	54	55	56	57	58	59	60	61	62	63
64	65	66	67	68	69	70	71	72	73	74	75
76	77	78	79	80	81	82	83	84	85	86	87
88	89	90	91	92	93	94	95	96	97	98	99

10. The double digit numbers values expression for three place value system would permit expression along grid / matrix format (2, 4) as under

Table of three Place value system

	01	02			
	10	11			
	12	20			
			21	22	100

11. It would be a blissful exercise to reach at expression formats for 4, 5, 6, 7 and 8 place value systems which would be of the following expression features:

Table of four Place value system

01	02	03	
----	----	----	--

		10	11	12		
	13	20	21			
22	23	30				
		31	32	33	100	

Table of five Place value system

01	02	03	04				10	
11	12	13					20	
21	22				23	24	30	
31					32	33	40	
				41	42	43	44	100

Table of six Place value system

01	02	03	04	05			10
11	12	13	14				20
21	22	23					
34	35	40	41				33
44	45	50				42	43
51	52	53	54	55	100		

Table of seven Place value system

01	02	03	04	05	06		
10	11	12	13	14	15		16
20	21	22	23	24			
25	26	30	31	32	33		
34	35	36	40	41	42		43
44	45	46	50	51			
52	53	54	55	56	60		
61	62	63	64	65	66	100	

Table of eight Place value system

01	02	03	04	05	06	07					
10	11	12	13	14	15	16					
17	18	19	20	21	22	23		26			
27	28	29	30	31	32		35	36			
37	38	39	40	41			44	45	46		
47	48	49	50				53	54	55	56	
57	58	59					62	63	64	65	66
67	68										
71	72	73	74	75	76	77					

12. Two place value system, popularly known as binary system avails pair of numerals (1, 0) with '0' being the place value (numeral).

13. Two place value system shall be having double digits expression as under:

00	01	
10	11	100

14. The numerals range (1, 0) are (0, 1) is also designated as remainder range of divisor '2'.

15. In case of three place value system, the remainders range comes to be (0, 1, 2).

16. Pingala Chandas Vedanga is basic scripture which works out 3-space within three dimensional frame in terms of binary system

17. Chandas Vedanga settles 8 Ganas as under

- (i) Magana (SSS) (viii) Nagana (111)
- (ii) Yagana (1SS) (vii) Bhagana (S11)
- (iii) Ragana (S1S) (vi) Jagana (1S1)
- (iv) Tagana (SS1) (v) Sagana (11S)

18. The pair of symbols being availed are of single and double values format parallel to single and pair of axes to work out 3-space within 3 dimensional frame as a set up of 8 octants.

- (i) Magana (□□□) (viii) Nagana (---)
- (ii) Yagana (-□□) (vii) Bhagana (□---)
- (iii) Ragana (□-□) (vi) Jagana (-□-)
- (iv) Tagana (□□-) (v) Sagana (---□)

19. It in a way amounts to numerals pair (1, 2). Formatted single pair (1, S) are accepted as the pair of symbols for

short vowels, long vowels / values pair (1, 2) geometric entities pair (line, plane) dimensional orders (linear, spatial) the symbolic expression with their scriptural designation and nomenclatures. *

Chapter 10

Different roles of 3-space

1. The manifestation format is of four folds:
 - (i) Dimension fold
 - (ii) Boundary fold
 - (iii) Domain fold
 - (iv) Origin fold
2. Cube has following four folds
 - (i) Linear axis as 1-space in the role of domain fold
 - (ii) Spatial boundary, 2-space in the role of boundary
 - (iii) Solid domain, 3-space in the role of domain fold
 - (iv) Origin has a seat of 4-space / origin fold
3. The above set up of cube is focusing the role of 3-space as domain fold.
4. This four fold set up of cube accepts expression as quadruple artifices of numbers (1, 2, 3, 4).
5. 3-space as domain fold is one of the roles of 3-space.
6. The other roles of 3-space are as dimension fold, boundary fold and origin fold.
7. The role of 3-space as origin fold permits chase in terms of quadruple artifices as (0, 1, 2, 3).
8. This is four fold expression for square (as hyper cube 2).
9. Here it would be relevant to note that 0-space plays the role of dimension of 2-space.
10. 1-space plays the role of dimension of 2-space.

11. 2-space plays the role of domain fold,
12. And 3-space plays the role of origin fold of hyper cube 2.
13. 3-space has boundary fold permits chase in terms of quadruple artifices expression (2, 3, 4, 5)
14. In this reference 2-space plays the role of dimension.
15. 3-space plays the role of boundary
16. 4-space plays the role of domain, and 5-space plays the role of origin.
17. Further 3-space also plays the role of dimension of hyper cube 5 permitting expression as (3, 4, 5, 6).
18. In this context, 3-space plays the role of dimension.
19. 4-space plays the role of boundary.
20. 5-space plays the role of domain and 6-space plays the role of origin.
21. Here it would be relevant to note that all the four roles of 3-space there can be a common expression format (4 x 4) grid format as under:

1	2	3	4
2	3	4	5
3	4	5	6
4	5	6	7
22. Let us have a pause and revisit above 4 x 4 format expression for the roles of 3-space.
23. Amongst others, the prominent feature of above expression format comes to be that the north east diagonal of above 4 x 4 format is having value 3 at its all points.

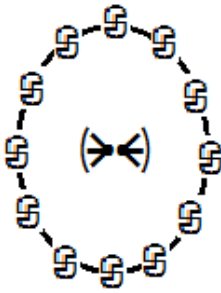
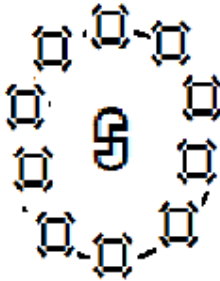
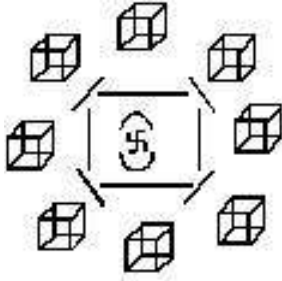
Chapter 11 Cube and Sphere

1. Cube and sphere are a pair of (representative regular bodies) of 3-space.
2. Regular bodies 1 which does not distinguish 1 dimension from another for its contributory role in the structural set up of the dimensional bodies under the given dimensional frame.
3. Cube and sphere do not distinguish between the contributory role of the dimensions of a three dimensional frame, and as such these are designated as representative regular bodies of 3-space within a three dimensional frame.
4. Amongst others, one other prominent features of the set ups of cube and sphere is that they accept common domain boundary ratio.
5. The domain boundary ratio of cube is $A^3:6B^2$.
6. Likewise the domain boundary ratio for sphere as well is $A^3:6B^2$.
7. One may have a pause here and take note that the while in case of cube, its boundary splits into six parts, while the boundary of sphere is a single integrated surface set up.
8. The common domain boundary ratio for both cube and sphere, as such brings us face to face with the feature as that domain fold of sphere permits split into six parts.
9. It is this feature which distinguishes the set ups of cube and sphere and makes them a distinct pair of representative regular bodies of 3-space within three dimensional frame.
10. One may have a pause here and take note that square and circle are also a pair of representative regular

bodies of 2-space and they as well accept common domain boundary ratio $A^2:4B^1$.

11. The above domain boundary ratios of 2-space and 3-space regular bodies lead us to common formulation $A^n:2n B^{n-1}$, $n=2, 3$.
12. This as such leads to a common formulation for all values of n in respect of representative regular bodies of whole range of spaces.
13. It would be a blissful exercise to comprehend and appreciate domain boundary ratios in case of $n=4, 5$ and 6 respectively in reference to representative regular bodies of $4, 5$ and 6 spaces.
14. (Hyper cubes $4, 5, 6$) domain boundary ratio in respect of hyper cube $4 / 4$ -space body comes to be $A^4: 8B^3$.
15. Further (Hyper cubes $4, 5, 6$) domain boundary ratio in respect of hyper cube $5 / 5$ -space body comes to be $A^5: 10B^4$.
16. Still further (Hyper cubes $4, 5, 6$) domain boundary ratio in respect of hyper cube $6 / 6$ -space body comes to be $A^6: 10B^4$.
17. Symbolic expression for these features in respect of hyper cubes $3, 4, 5$ and 6 may be as under.





Chapter 12

Triloki and Trimurti

146. *Triloki and Trimurti*

Hyper cubes 1 to 3 synthesise the set up of *Triloki* while hyper cubes 4 to 6 are designated and known as formats of *Trimurti* : *Lord Brahma*, *Lord Shiv* and *Lord Vishnu*. *Lord Brahma* is the presiding deity of 4-space with the hyper cube – 4 being its representative regular body and *Lord Shiv* and *Lord Vishnu* are the presiding deities of 5-space with hyper cube 5 as its representative regular body and 6 - space with hyper cube 6 as its representative regular body.

147. **Comparative table of idol of Trimurti & hyper cube 4, 5& 6**

Idol of lord Brahma, four head lord, creator the supreme, is of the features parallel to that of hyper cube 4, which may be tabulated as under:

Sr.	Feature of idol of lord Brahma	Feature of hyper cube 4
1	Four heads	Four dimension
2	Each head equipped with A pair of	Spatial dimensional order (2-space in the

	eyes.	role of dimension)
3	Lotus seat of eight petals	Solid boundary of eight components
4	Seat of lord shiv (five head lord) in the Heart of lord Brahma	5-space in the role of origin fold
5	Lord Brahma meditates in His heart upon Lord Shiv and multiplies as ten brahmas	Hyper cube 5 has creative boundary (4-space in the role of boundary) of ten components

148. Idol of lord Shiv, five head lord, transcendental lord, is of the features parallel to that of hyper cube 5, which may be tabulated as under:

Sr.	Feature of idol of lord Shiv	Feature of hyper cube 5
1	Five heads	Five dimension
2	Each head quipped with Triple eyes.	Solid dimensional order (3-space in the role of dimension)
3	Ten beautiful arms	Hyper Solid boundary of ten components
4	Seat of lord Vishnu (six head lord) in the Heart of lord Shiv	6-space in the role of origin fold
5	Lord Shiv transcends and manifests Dwadash Aditya (Twelve sons)	Hyper cube 6 has transcendental boundary of 12 components

149. Idol of lord Vishnu, six head lord, self referrallord, is of the features parallel to that of hyper cube 6, which may be tabulated as under:

Sr.	Feature of idol of lord Vishnu	Feature of hyper cube 6
1	Six heads	Six dimension
2	Each head equipped with Quadruple eyes.	Hyper Solid 4 as dimensional order (4-space in the role of dimension)
3	DwadashAdityas (12 sons)	Transcendental boundary of ten components
4	Seat of lord Shiv (five head lord) in the Heart of lord Vishnu	5-space in the role of dimension of origin fold
5	Lord Vishnu transcends and manifests as 14 Bhuwans	Hyper cube 7 has self referral boundary of 14 components

CHASE OF TRILOKI FEATURE

I

Conceptual formulation

1. 'Triloki' त्रिलोकी: is a Sanskrit formulation.
2. 'Triloki' accepts simple English rendering as 'unified 3-spaces'.
3. The formulation 'Triloki' is a composite formulation of a pair of sub formulation namely 'Tri (त्रि)', means three andloki 'लोकी:' namely space (s) here in 'ई', spatial order.
4. With it the formulation 'त्रिलोकी' acquire feature of both (i) 3 as triple (1, 2, 3) and (ii) Space (s)
5. Here it would be relevant to note that NVF (three) = 56 = NVF (Light) and NVF (Space) = NVF (Eye) + NVF (Ace)
6. The formulation 'Ace' is of features parallel to artifices triples '1, 3, 5' which further is parallel to spaces triple (1-space, 3-space, 5-space) which still further is parallel to the artifices triple (n, n + 2, n + 4). This is still further parallel to dimension of dimension, dimension, domain. Hence formulation 'space' is of features 'eye' transcendence taking from dimension of dimension to dimension to domain.

Transcendental code value chase

7. त्रि-लोकी:

त् - ि लो क् ई :

8. त् - ि लो क् प्र

$$4+1+2=7 \quad 5+7+1+1=14$$

$$7+14=21$$

$$= 1+2+3+4+5+6$$

9. त् - ि लो क् ई

$$4+1+2=7 \quad 5+7+1+4=17$$

10. त् - ि लो क् ई :

$$4+1+2=7 \quad 5+7+1+4+13=30$$

$$7+17=24=4 \times 6$$

11. $4+1+2=7 \quad 5+7+1+4+13=30$

$$7+30=37$$

12. [7, 14, 17, 30]

[21, 24, 37]

i. $7 = 7$ edges

ii. $14 = 8$ corners + 6 surfaces

iii. $17 = 7$ edges + 10 directions

iv. $30 = 8$ corners + 6 surfaces
 $= 12$ edges + 3 axes

+ 1 volume

v. $21 = 1 + 2+3+4+5+6$

$$(21, 12) = 33$$

$$= 1 \times 3 \times 7$$

vi. $24 = 4 \times 6 = (5-1) (5+1)$

$$(24, 42) = 66 = (33, 33)$$

vii. $37 = 7$ geometries range of 3 space

III

NVFs

13. Three space

a. $20 + 8 + 18 + 5 + 5 = 56 = (\text{Light})$

b. $19 + 16 + 1 + 3 + 5 = 44 = (\text{Ray})$

c. $56 + 44 = 100 = (\text{Discipline})$

14. Three / Light / Domain

$$(56, 65) = 121 = (\text{Unification})$$

15. Space / Ray / Pair

$$44 = (22, 22)$$

$$= (\text{go, go})$$

$$(44, 44) = 88 = (\text{Volumme})$$

IV

Features chase formats

16. Artifice 3

Number 3

$$17. (3, 5) = 3 + 5 = 8 = 2^3$$

Superimposition of dimension fold and domain
fold

$$18. (1, 1, 1) = 6$$

Dimensional synthesis value

$$1+2+3 = 6$$

19. (single axis, pair of axes, triple axes) / triple axes
sequence

$$(1, 2, 3)$$

(Interval, square, cube)

(1-space, 2-space, 3-space)

20. Triples sequences

$$(1, 2, 3)$$

$$(0, 1, 2)$$

$$(n, n-1, n-2)$$

$$(n, n+1, n+3)$$

21. Triples of different values

$$N, n+r, n+l$$

$$N^0, (n+r)^0, (n+l)^0$$

$$1, 1, 1$$

22. Types of intervals

- i. Single point fixation
- ii. Double point fixation
- iii. Triple point fixation

23.

- i. close interval
- ii. open interval
- iii. half open interval
 - a. open on left side
 - b. open on right side

24.Types of lines

- i. Line without bend
- ii. Line with single bend
- iii. Line with double bend
- iv. Line with multiple bends

25.Vertices

- i. Single vertices, just a point
- ii. Pair of vertices, as end points of n interval
- iii. Triple vertices, as vertices of a triangle (polygon of three sides)
- iv. Quadruple vertices as vertices of a rectangle (polygon of four sides)
- v. Polygons of n sides

26.Points and length units

- a. Three points on a line enclose a pair of length units
- b. In general n points enclose (n-1) length units on a line

- c. Three points on a circumference enclose three units of circle
- d. In general n points on a circumference enclose n units of circumference

27. Interval, square and cube

- i. Ends point / corners triple $2^1, 2^2, 2^3,$
- ii. Boundary components triple $(2, 4, 6)$
- iii. Domains values triples $(1^1, 1^2, 1^3)$
- iv. Dimensional axes triple $(1, 2, 3)$
- v. Geometric set up triple $(3, 9, 27)$
- vi. Set up triples formulation $(n+2)^1, (n+2)^2, (n+2)^3$

28. Chase steps triple within three space

- a. Interval, square and cube within a cube.
- b. This constitutes an ad-infinitum sequence chase of volume of a cube / domain fold of cube as hyper cube 3

29. Internal diagonal

- a. A line passing through center of the cube and connecting a pair of vertices of cube is an internal diagonal of the cube
- b. There are four internal diagonal of a cube
- c. The internal diagonal are of a pair of orientations
- d. Set up of an internal diagonal is the setup of super imposition of a pair of orientations. This set up of super imposition of a pair of orientation is the set up of super imposition of

dimension fold (-1 space as dimension) upon domain fold (1-space as domain fold).

- e. The dimension fold and domain fold super imposition in this case sandwiches zero space as boundary folds of hyper cubes
 - f. These three folds (dimension fold, boundary fold and domain fold) are sustained by the origin fold, which is of a spatial order
 - g. The spatial order is fountained from the origin of 3-space / center of cube which is a seat of 4-space.
 - h. These feature together will help us comprehend the existence of four internal diagonals being there because of the spatial order set up of the center of the cube
30. Split of a three dimensional frame into a pair of three dimensional frame
- a. It would be a blissful exercise to chase the split of a three dimensional frame into a pair of three dimensional frame of half dimensions.
 - b. Still further it would be a very blissful exercise to chase the split of the internal four diagonals into four pairs of half diagonals.
 - c. Still further it would be a very blissful exercise to chase the split of three dimensions of a three dimensional frame embedded at the center of the cube and simultaneous manifesting of six surface plates at boundary of the cube

- d. Still further it also would be a very blissful exercise to chase the split of volume part / domain part of cube in terms of three planes sustaining three dimensional axes
- e. Still further it also would be a very blissful exercise to chase of the three dimensional frames of half dimensions embedded in all the eight corner points of the cube.

V

Race

- 31. Formulation (RACE) is of NVF value $27 = NVF$ (Race).
- 32. $NVF (R) = 18 = NVF$ (Head).
- 33. Artifice 18 accepts re-organization as $18 = 3 + 4 + 5 + 6$ and quadruple $(3 + 4 + 5 + 6)$ is parallel to manifestation layer $(3, 4, 5, 6)$ / (3-space, 4-space, 5-space, 6-space) features of hyper cube 5.
- 34. $NVF (A) = 1$, $NVF (C) = 3$ and $NVF (E) = 5$ as triple $(1, 3, 5)$ is parallel to artifices triple $(n, n+2, n+4)$ which further is parallel to spaces triple $(n\text{-space}, n+2\text{ space}, n+4\text{ space})$ and this triple is parallel to the features of $(n\text{-space as dimension of dimension}), n+2\text{ space as dimension and } n+4$

space as domain) with this , there is a reach from dimension of dimension to domain fold.

35. These features in respect of triple (a, c, e) / (1, 3, 5) leads us to a reach from 1-space as dimension of dimension, 3-space as dimension and 5-space as domain.

36. One may have a pause here and be face to face with $NVF(\text{Space}) = NVF(\text{sp}) + NVF(\text{ace})$.

37. $NVF(\text{sp}) = 19 + 16 + 35 = NVF(\text{eye})$ would help us reach at, amongst other, at the following features

i. 19, 18, 17, 16 is a quadruple in reverse orientation. The value $19 + 16 = 18 + 17 = 35$, as such leads us to quadruple summation value $= 19 + 18 + 17 + 16 = 35 + 35 = 70 = NVF(\text{Stop}) = NVF(\text{Eye}) + NVF(\text{Eye})$. Still further $NVF(\text{Ace}) = 1 + 3 + 5 = 9$ leads to triple (1, 3, 5), a transcendence triple as it leads from 1-space to 3-space to 5-space as a pair of transcendence steps.

j. The formulation 'head', 'race' and 'space' deserve to be chased simultaneously to have comprehension about (i) head (ii) eye (iii) transcendence triple (a, c, e), (iv) ace), (v) race and (vi) space. It would be a blissful exercise to tabulate various words from orthodox vocabulary with formulation 'ace' being sub formulation of bigger formulations and to chase features

VI

External and internal six surfaces frames of cube

38. Number six is a perfect number. It is the first perfect number.
39. $6 = 1 + 2 + 3 = 1 + 2 + 3 = 2 + 2 + 2 = 3 + 3$ and parallel to it primes triple (1, 2, 3), triple linear axis of three dimensional frame, set of six half dimensions, set of six surface plates of cube and set of six spatial formats for six half dimensions of a three dimensional frame and center of the cube, all deserve to be chased simultaneously.
40. It would be a blissful exercise to revisit spatial formats for three axes, there splits into six parts and further split for each part in four quarters and every quarter being of a pair of faces (surfaces)
41. Still further it also would be blissful to revisit cut of a cube into eight sub cubes
42. The chase of structural set ups of a eight sub cubes individually as well as collectively and further chase of 3s` content lumps of each of eight sub cubes, individually and collectively, being completely stripped off, of their internal and external frames

VII

Chase formats

43. Amongst others, the following chase formats are of prominently at play in the set ups of the volumme (domain fold) / (3-space content lump) of cube, sub cubes and sub cubes of each sub cube:

- i. Format of an interval, a fixation in terms of a single but a moving point
- ii. Format of an interval fixation in terms of a pair of end points. The pair of orientations with end points becoming first and second, and super imposition of orientations along the set up within pair of end points, that way, may make it a distinct format
- iii. Format of an interval fixation in terms of three points namely a pair of end points and a middle point in between.
- iv. The above format with a focus upon its different formats shall be manifesting different types of formats which may be taken as a class of formats associated with the format of an interval having fixation in terms of triple points
- v. Amongst others, the formats of above class may be making the following specific featured formats being distinct formats:

- a. Middle point being a moving point but never reaching either end point.
 - b. Bend provided at the middle point.
 - c. Split of internal in two parts namely from first end point to the middle and from middle to the second end point
 - d. From the first end point to the middle and from the second end point to the middle
 - e. From the middle to the first end point and from the middle to the second end point
 - f. Both parts may be equal, or may be unequal.
 - g. Both parts to be simultaneously unequal as well as equal; unreality may be because of length and equality to be because of infinite number of points structuring each part
- vi. The chase of such formats may be along place value systems, prominently amongst them being 10 place value system.
44. Amongst others, the following features may be structuring different classes of formats for chase of different classes of format of intervals in terms of place value system:
- a. Reach to be as (1, 1, 1, 1)

- b. Reach may be as (1, 1+1, 1+1+1, 1+1+1+1, ---).
This may be taken as a feature of chase steps
(1, 2, 3, 4, ---)
- c. Reach may be as (1, 2, 4, 8, --) as well of the
feature of (1, 2, 3, 4, ---) as $2^0 = 1$, $2^1 = 2$, $2^2 = 4$,
 $2^3 = 8$, ---- as such shifting chase sequence (1,
2, 3, ---) and base to at index with the only
difference that here the later stage the
sequence steps include 'zero' as a starting
point and the sequence at index become (0, 1,
2, 3, ---)
45. Reach may be as (01, 02, 03, --- 10) which shall be
making the end values pair (01, 10) as a reflection
pair as much as that 01 and 10 become object,
image pair). Here 0 and 1 replace their places
46. Reach may be as (10, 9, 8, 7, 6, 5, 4, 3, 2, 1, 0) as a
decreasing sequence while the reach as 0, 1, 2, 3, -
- 10 is an increasing sequence.
47. Reach may be as (1, 3, 5, ---) as a reach by a single
jump at each step parallelly would emerge another
jumping sequence (2, 4, 6, 8, --). This pair of
jumping sequences (1, 3, 5, ---) and (2, 4, 6, --), in
a way would be a split for the increasing sequence
(1, 2, 3, 4, 5, 6). Parallel to it there would be a split
for decreasing sequence (10, 9, 8, 7, ---) as a pair
of decreasing sequences (10, 8, 6, --) and (9, 7, 5, -
--)

48. Further there can be triple split increasing sequences of double jumps for the increasing sequence (1, 2, 3, 4, 5, 6, --) as (i) 1, 4, 7, -- (ii) 2, 5, 8, --- and (3, 6, 9, --). Likewise there would a triple split for decreasing sequence (10, 9, 8, 7, --). Further there can be splits of sequentially increasing multiple jumps. This as such as shall be leading us to the remainder ranges for divisions by 2, 3, 4, --- (0, 1), (0, 1, 2), (0, 1, 2, 3)

49. The individual features of members of increasing sequence (0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10) and pairing of those features for any pair, triple, quadruple members of above sequence members, shall be manifesting different classes of formats, viz.

- a. 01, 10 is a reflection pair
- b. 1, 2 is a pair leading to a pair of sequences namely (1, 2, 3, 4) and (1, 2, 4, 8)
- c. Pair (1, 3) leads to $3 = 1 + 1 - (-1)$, a dimensional synthesis value of a pair of linear dimensions
- d. (1, 4) a pair hyper cube 1 and quadruple of folds of its manifestation layer
- e. (1, 5) a pair of hyper cube` 1 and transcendental which takes uptill the base of origin folds
- f. Like that there can be chase for any pair of numbers in terms of numerals of ten place value system and in general in any place value system

VIII

Sequential manifesting of hyper cubes 4, 5 and 6 set ups within and outside domain folds

50. Here, the volume of cube.
51. The external manifestation of hyper cube 4 onwards is the features of spatial boundary of cube
52. The internal manifestation of hyper cube 4 within cube is the feature of linear order transiting and transforming as spatial format taking to center of cube / origin of 3-space.
53. The spatial format of linear axis, as such is having a degree of freedom of motion and this as such shall be structuring 3-space set up and boundary. The second face, as a second phase, being of an opposite orientation shall be creating, on its motion availing degree of freedom of motion shall be constructing and structuring a solid boundary.
54. Such structuring of a pair of solid components, would deserve a chase for their coordination in terms of 0-space role of dimension of 2-space (spatial format) of a linear dimension.

55. The availability of four internal diagonal, as such shall that way structure out four pairs of above format of pair of solid boundary components.
56. It would be relevant to note that each internal diagonal coordinates a pair of three dimensional frames of half dimensions embedded in corner of the cube. The super imposition of pair of orientations synthesizing as diagonal as such shall be making available a pair of three dimensional frame of half dimension but of opposite orientation super imposed with common origins super imposed upon corner of the cube. These features taken together shall be leading to a set up of four pairs of three dimensional frames of full dimensions and parallel to it there would emerge a solid boundary of 8 components.
57. Here it also would be relevant to note that set of four three dimensional frames of full dimensions (of super imposed orientations parallel to -1 and +1, which otherwise are of the features of pairing of dimension fold and domain fold, together with a fifth three dimensional frame embedded at the center of the cube, that way shall be making available a set of five three dimensional frames of full dimensions which shall be leading to a set up of a seat of origin of 4-space (hyper cube 4) at center of cube.

58. The emergence of solid dimensional origin, spatial dimensional order and solid boundary, that way shall be amounting to structuring of the space as space manifesting as domain fold of hyper cube 4. Here it also would be relevant to take note that $NVF (Volumme) = 88 = NVF (Space) + NVF (Space)$.
59. One may have a pause here and take note that $88 = 44 + 44$ is parallel to the features of accepting $(1/2)$ as a working unit. This in other would mean working with '2 as 1' and '1as 2' simultaneously. It is going to be parallel to a transition from linear dimensional order to spatial dimensional order by a transition and shift from '1 as a unit' to $\frac{1}{2}$ as a unit.
60. The above feature of a shift from '1' to $\frac{1}{2}$ together with the feature of super imposition of dimension fold and domain fold, when shall be chased further it shall be leading to the next step
- shift from '1' to '1/3' , and
 - super imposition of 3-space as solid dimensional order upon 5-space as domain fold
 - Still a step ahead, shift would be
 - 1 to $\frac{1}{4}$ and
 - super imposition of 4-space as hyper dimensional order upon 6-space as self referral domain

These features together shall be providing a shift from hyper cube 5 to hyper cube 8 and accordingly would emerge the ratio of 16 boundary components of hyper cube 8 and 48 coordinates of hyper cube 8 being 8×6 as 6-space is to play the role of dimension of 8-space.

These features together shall be providing a shift from hyper cube 6 to hyper cube 10 and accordingly would emerge the ratio of 20 boundary components of hyper cube 10 and 80 coordinates of hyper cube 10 being 10×8 as 8-space is to play the role of dimension of 10-space.

61. It would be blissful exercise to note that above pair of attainments shall be leading to transcendence triple (1, 3, 5) and (2, 4, 6) which together shall be structuring a range 1, 2, 4, 5, 6.
62. 1), and in general (1, 2, 3, ---- n) and (n, n – 1, --- 3, 2, 1), on their chase would help us reach at large number of features of dimensional spaces contents manifesting as domain folds in terms of their respective dimension folds
63. In particular this shall be bringing us face to face the dimensional synthesise values VMS & T formats for their chase for pure and applied values.

Note : -

Here it may be relevant to mention that the approach features of 'learning and teaching'. This in the context of 'learning and teaching VMS & T', it is expected to be of following features

- i. Make your own dictionary
- ii. Express about concepts
- iii. Find time to evaluate one's comprehensions
- iv. Share insight
- v. Enlist exercises
- vi. Pose hurdles
- vii. Tabulate indicators
- viii. Teach
- ix. Learn while teaching
- x. Attempt text book
- xi. Explore further
- xii. Appreciate pure values
- xiii. Have an eye upon applied values
- xiv. Chase existence within human frame
- xv. Chase existence beyond human frame
- xvi. Built VMS & T Classroom instructions methodology

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CHASE OF TRIMURTI VALUES

1. Lord Brahma, Lord Shiv, Lord Vishnu are 'Trimurti'.
2. Lord Brahma is overlord of 4-space, Lord Shiv is overlord of 5-space and Lord Vishnu is overlord of 6-space.
3. Hyper cube 4 manifests 4-space content as its dimension fold, hyper cube 5 manifests 5-space content as its domain fold and hyper cube 6 manifest 6-space content as its domain fold.
4. Hyper cube 4 is of features parallel to four fold manifestation layer (3, 4, 5, 6), hyper cube 5 is of features parallel to four fold manifestation layer (4, 5, 6, 7).
5. The domain boundary ratio of hyper cube 4 set up is of formulation $A^4: 8B^3$, while the domain boundary ratio of hyper cube 5 set up is of formulation $A^5: 10B^4$ and domain boundary ratio of hyper cube 6 set up is of formulation $A^6: 12B^5$.
6. Idol of lord Brahma, four head lord, creator the supreme, is of the features parallel to that of hyper cube 4, which may be tabulated as under:

Sr.	Feature of idol of lord Brahma	Feature of hyper cube 4
1	Four heads	Four dimension

2	Each head equipped with A pair of eyes.	Spatial dimensional order (2-space in the role of dimension)
3	Lotus seat of eight petals	Solid boundary of eight components
4	Seat of lord shiv (five head lord) in the Heart of lord Brahma	5-space in the role of origin fold
5	Lord Brahma meditates in His heart upon Lord Shiv and multiplies as ten brahmas	Hyper cube 5 has creative boundary (4-space in the role of boundary) of ten components

7. Idol of lord Shiv, five head lord, transcendental lord, is of the features parallel to that of hyper cube 5, which may be tabulated as under:

Sr.	Feature of idol of lord Shiv	Feature of hyper cube 5
1	Five heads	Five dimension

2	Each head equipped with Triple eyes.	Solid dimensional order (3-space in the role of dimension)
3	Ten beautiful arms	Hyper Solid boundary of ten components
4	Seat of lord Vishnu (six head lord) in the Heart of lord Shiv	6-space in the role of origin fold
5	Lord Shiv transcends and manifests DwadashAditya (Twelve sons)	Hyper cube 6 has transcendental boundary of 12 components

8. Idol of lord Vishnu, six head lord, self referrallord, is of the features parallel to that of hyper cube 6, which may be tabulated as under:

Sr.	Feature of idol of lord Vishnu	Feature of hyper cube 6
1	Six heads	Six dimension

2	Each head equipped with Quadruple eyes.	Hyper Solid 4 as dimensional order (4-space in the role of dimension)
3	DwadashAdityas (12 sons)	Transcendental boundary of ten components
4	Seat of lord Shiv (five head lord) in the Heart of lord Vishnu	5-space in the role of dimension of origin fold
5	Lord Vishnu transcends and manifests as 14 Bhuwans	Hyper cube 7 has self referral boundary of 14 components

9. Summation value of triple (4, 5, 6) is $4 + 5 + 6 = 15 = 1 \times 3 \times 5$, parallel to linear dimensional equivalence for the transcendental domain's dimensional frame of five solid dimensions.

10. 4×4 matrix format as expression format for four consecutive manifestation layers leads to total summation value as 4^3 :

(1, 2, 3, 4),

(2, 3, 4, 5),

(3, 4, 5, 6),

(4, 5, 6, 7).

11.5 x 5 matrix format as expression format for five consecutive transcendental ranges leads to total summation value as 5^3 :

(1, 2, 3, 4, 5),

(2, 3, 4, 5, 6),

(3, 4, 5, 6, 7),

(4, 5, 6, 7, 8),

(5, 6, 7, 8, 9).

12.6 x 6 matrix format as expression format for six consecutive self referral ranges leads to total summation value as 6^3 :

(1, 2, 3, 4, 5, 6),

(2, 3, 4, 5, 6, 7),

(3, 4, 5, 6, 7, 8),

(4, 5, 6, 7, 8, 9)

(5, 6, 7, 8, 9, 10)

(6, 7, 8, 9, 10, 11).

13.The 4 x 4 matrix format as expression for manifestation layers of folds themselves being manifestation layers shall be of entries of hyper cubes:

H2 h3 h4 h5

h3 h4 h5 h6

h4 h5 h6 h7

h5 h6 h7 h8

14. Parallel to above, the summation values of four folds of hyper cubes shall be

6 10 14 18 with summation value 48

10 14 18 22 with summation value 64

14 18 22 26 with summation value 80

18 22 26 30 with summation value 96

With grand summation value = 288

The artifice 288 accepts re-organization as $144 + 144$.

This further admits re-organization as $12 \times 12 + 12 \times 12$.

15. Here it would be relevant to note that NVF (Space Discipline) = 144 = NVF (Formulation).

16. Further it also would be relevant to note that 6-space/ hyper cube 6 accepts transcendental boundary of 12 components.

17. Let us have a pause here and have a fresh look at the set up of hyper cube 1 as a four fold manifestation layer (-1), (0, 1, 2, 3). It would help us comprehend, imbibe and to have an insight as to how the origin (fold) goes inside the domain

(fold) at middle (of interval / center of square / cube / hyper cubes) and leads to the feature of compactification and super imposition of origin folds upon each other. And structure along the format of a 'vertical line' as of values of a 'straight line' which also accepts the features of a 'transcending line'.

18. The formulations (i) vertical line (ii) straight line and (iii) transcending line deserve to be chased to have comprehension for imbibing the values of these set ups and to have insight about them.
19. Vertical line : - Chase of this formulation in terms of NVF values would bring to focus as that NVF (vertical line) = $90 + 40 = 130 =$ NVF (artifices line) = $130 = 65 + 65 =$ NVF (static state) = NVF (continuum).
20. NVF (Straight line) = NVF (2-space line) = $142 = 71 + 71 =$ NVF (Sphere, Sphere).
21. NVF (Transcending line) = NVF (Uncountable line) = $168 =$ NVF (colour) + NVF (colour).
22. It would be relevant to note that $168 - 142 = 26 = 5 + 6 + 7 + 8$, parallel to quadruple of artifices (5, 6, 7, 8) which further is parallel to four fold manifestation layer (5, 6, 7, 8) of hyper cube 7.
23. Further as that NVF (transcending line) = NVF (Transcending mind), as such NVF (Head) = $18 = 3 + 4 + 5 + 6$, parallel to features of quadruple

- artifices (3, 4, 5, 6) which further is parallel to four folds (3, 4, 5, 6) of hyper cube 5.
24. It would be a blissful exercise to chase 'transcending mind' of features of hyper cube 7 as values and order of hyper cube 5 as format of 'head'.
 25. The attainment for hyper cube 5 as 'head' of 'transcending mind' or the values and features attained by and in terms of the values and order of Discipline of Vedic Mathematics, science and Technology.
 26. The transcending mind being of transcending feature, in addition to other values has the potentialities of 'transcendence' because of which 'mind' simultaneously works out multiple operations 'including arithmetic operation, reflection and refraction operation', jumping and formatting operations as transcendental carriers (5-space in the role of transcendental order).
 27. It would be blissful to chase different phases and stages of formulation 'straight' which when translated into artifices language shall be yielding a range of values (19, 20, 18, 1, 9, 7, 8, 20).
 28. The starting point is value '19'.
 29. This as such shall be taking us to the format of southern hemisphere.
 30. The triple (17, 18, 19) is parallel to the values of northern hemisphere, center and of southern

- hemisphere. These are the three folds of manifestation layer (16, 17, 18, 19).
31. Artifices and numbers on the format of 1-space with (-1) space as its dimension, shall be putting the above quadruple of artifices (16, 17, 18, 19), in reverse orientation as (19, 18, 17, 16).
 32. The processing along the format of hemispheres, in a sequential order takes us from triple (17, 18, 19) to quadruple (17, 18, 19, 20) but the end value 20 of triple (18, 19, 20), shall be having a placement at the middle which would bring it superimposed upon the artifice value 18 in the placement order of the triple (17, 18, 19).
 33. This in a way would also set progression in the reverse order from 19 to 20 taking from 19 for placement over 18.
 34. This in a way is a step which takes from origin fold to the domain fold placement. Here it would be relevant to note that the super imposition of value 20 over 18 is the super imposition of the feature of domain fold over dimension fold. The second progression step of the formulation 'straight' is which shall be taking from $NVF(T) = 20$ to $NVF(R) = 18$.
 35. One may have a pause here and take note that while during the first progression step reaching from 19 to 20 was of value '1', the same at the

- phase and stage of second progression which takes from value 20 to 18, it is of value '2'.
36. This in a way would mean that first progression step is of value '1' while the second progression step is of value '2'.
37. One may further have a pause here and take note that while in case of first progression step the format was to reach from origin fold to domain fold, so in continuity, at the phase and stage of second progression the format would be which would take from domain fold to the dimension fold.
38. It is this reach from origin fold to dimension fold which deserves to be comprehended fully to imbibe the feature of 'straight', as it is taking up till this stage from '1' to '2'.
39. The third progression step which takes from NVF (R) = 18 to NVF (A) = 1 which is of the features of awakening from sleep as $NVF(\text{sleep}) = 57 = 19 + 20 + 18$.
40. The orientation which was previously reversed to have a chase format, is to be reversed again as 'line' being straighten is to be of the features of (domain, dimension) super imposition features. NVF (A) = 1 is of features parallel to that of 1-space body / hyper cube 1.

41. One may have a pause here to take note that progression uptill this stage is of triple (19, 20, 18) followed by single value (1).
42. As such the progression ahead as well is to be of the features of triple values to be followed by a single value. This shall be taking us to triple values (9, 7, 8) and (20).
43. The triple values (9, 7, 8), evidently is to bring the value at third place of the triple (9, 8, 7) at the middle to make it the triple values set up (9, 7, 8).
44. The final progression step is of transition and transformation from the values format of NVF (H) = 8 to value format of NVF (T) = 20. It would be a very blissful exercise to chase artifices pair (8, 20). This artifices pair (8, 20) permits re-organization as (4 + 4), (10+10).
45. Further as that artifice 4 permits re-organization as $4 = 1 + 1 + 1 + 1$ and artifice 10 = 1 + 2 + 3 + 4. It as such would mean that the affine equal values progression format transit and stands transformed into a sequential values format.
46. Still further as that such streams are of two folds, as are expected of super imposed 1-space as domain upon -1-space as dimension. Simultaneously it also would be relevant to note that 1-space in the role of dimension shall be structuring hyper cube 3 with 4-space of spatial order as origin fold.

47. Still further as that 4-space and parallel to it artifice 4 also accepts super imposition of orientations as that $4 = 2 \times 2 = (-2) \times (-2)$.

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CHASE OF POLE STAR (DHURUV) ORDER

1. Artifice 7 / 7-space / hyper cube 7 chase shall be a step ahead of artifice 6 / 6-space / hyper cube 6.
2. Amongst others, prominent features of artifice 7 are :
 - a. 7 is a prime.
 - b. 7 is the biggest prime numeral of ten place value system.
 - c. 3-space has 7 geometries.
 - d. cube has 7 versions
 - e. 7 edges connect all the eight corners of the cube.

f. 3 dimensional frame coordinates 7
geometric components namely

i. Origin

ii. Triple pairs of half dimensions

g. hyper circles 1 to 7 increase.

3. Artifices range (1, 2, 3, 4, 5, 6) and its reverse (6, 5, 4, 3, 2, 1) lead to 6 pairs (1, 6), (2, 5), (3, 4), (4, 3), (5, 2) and (6, 1) which as their summation values lead to common value '7'.
4. The above pairs lead to differences values sequence (5, 3, 1, -1, -3, -5).
5. This range (5, 3, 1, -1, -3, -5) is five fold transcendence values steps taking (i) from 5-space to 3-space (ii) from 3-space to 1-space (iii) from 1-space to -1 space. (iv) from -1 space to -3 space and finally from -3 to -5 space.

6. Further this range permits split as a pair of limbs of parabolic curve format.
7. Parallel to it range (0, 1, 2, 3, 4, 5, 6) and its reverse (6, 5, 4, 3, 2, 1, 0) shall be leading to differences range (6, 4, 2, 0, -2, -4, -6).
8. The pair of transcendence ranges (5, 3, 1, -1, -3, -5) and (6, 4, 2, 0, -2, -4, -6). On their simultaneous chase shall be focusing upon the unity state itself a synthetic state which because of it simultaneously unifies as a linear sequential progression as well as a spatial sequential progression because of which there emerges increase uptill 7 steps and also there emerges a transcendence there from of progression in continuity but with a shift to spatial order.
9. The above features make pole star with 7-space format as origin fold of 6-space (Sun) which deserves to be chased for existence phenomenon within solar universe.
10. Truth wind up

‘Truth wind up’ formulation deserves to be chased. NVFs equations would be of help for this chase.

$$\text{NVF (Truth)} = 87 = 50 + 37 = \text{NVF (Wind)} + \text{NVF (Up)}.$$

$$\text{NVF (Wind)} = \text{NVF (W)} + \text{NVF (In)} + \text{NVF (D)}$$

$\text{NVF (W)} = \text{NVF (end)}$, as such NVF (Wind) is ‘End’ in ‘4’. This feature as that ‘end’ is in ‘4 / 4-space’ would help us comprehend as that end is attainable in 4-space. $\text{NVF (Up)} = 37 = \text{NVF (Seal)}$. As such the attainability as well is sealed. And, it is ‘Truth’, which is ‘void’ seal. The artifice 87 is of the features that there is ahead of artifice 7 as well. Artifice 7 is the biggest prime numeral. Beyond that as well is the artifice ‘8’. Hyper circle 1 to 7 increase and beyond that from hyper circle 8 onwards, there is a decrease.

It is because of a linear order which structures 3-space of 7 geometries range.

Further as that dimensional synthesis range for 3-space as dimension is (3, 5, 6, 6, 5, 3, 0, -4, -9, ---), as per which non negative values are only uptill synthesis of 7 solid dimensions. Beyond that there are negative values.

First negative value is '-4'. However within 4-space, which is of spatial order, there is super imposition of orientations, as much as that $(2 \times 2) = (-2) \times (-2)$. It is this feature which would help us appreciate that domain boundary ratio of hyper cube 4 is $A^4: 8 B^2$.

Further as that $8 = 2^3$, And the 'Truth' is that there is existence beyond linear order and it takes us beyond artifice 7 to artifice 8 as a increasing step.

It would be a blissful exercise to revisit and chase firstly cube within cube and to reach at the structuring of volumme of cube as along the format of hyper cube 4.

Further it also would be a very blissful exercise to chase cube within hyper cube 4. The set of eight corner points as zero space bodies, 8 in number shall be in their dimensional role leading to dimensional synthesis values range (0, 2, 6, 12, 20, 30, 42, 56). NVF (light) = 56 = NVF (domain) = NVF (three) = NVF (folds).

Further as that 12 edges of the cube, in their dimensional roles of 12 linear dimensions, on their synthesis shall be yielding synthesis values range (1, 3, 6, 10, 15, 21, 28, 36, 45, 55, 66, 78). NVF (Ambrosia) = 78.

Further as that (78,87) as reflection pair and as of summation value $165 = 15 \times 11$ is parallel to the features of dimensional coordinates of 11 geometries of 5-space.

Still further as that 6 surfaces of cube in their spatial dimensional roles of 6 spatial dimensions shall be structuring synthesis values range (2, 4, 8, 10, 12). The artifices 2, 4,

6, 8, 10 & 12 are parallel to the boundary components of hyper cubes 1, 2, 3, 4, 5, 6.

These features, that way shall be with stripping off of the boundary of cube stitched as 8 points, 12 edges and 6 surfaces shall be putting 3-space content lump which in dimensional role of 3-space shall be structuring 5-space as transcendental origin of 4-space and this as transcendental dimensional order shall be creating unity state. (7-space) set up.

Parallel chase for sphere as hyper sphere 3 for 'wind up truth' chase of transition and transformation from artifice value 7 to artifice value 8 of the features of spatial order shall be very blissful and same would be enriching insight as to the domain boundary ratio in both cases of cube and sphere being of same formulation $A^3 : 6B^2$ as that infinite cube is of the format of a sphere.

Note:-

1. Up to date and organize your dictionary under following heads
 - i. VMS & T
 - ii. 5-space (domain)
 - iii. Artifice 5
 - iv. Triloki,
 - v. Trimurti
 - vi. Pole Star
 - vii. Manifestation
 - viii. Transcendence
 - ix. Self Referral state
 - x. Unity State
 - xi. Five orbital's
 - xii. One thousand names
 - xiii. Sun
 - xiv. Existence within human frame
 - xv. Existence beyond human frame



3

A

3

A0

3. I

4.

43

Lesson – 1

99. Cube (📐)

100. Representative body of 3-space
101. Three linear dimension
102. 'length' as a 'unit';
103. 'area' as a unit,
104. 'volumme as a unit'.
105. origin of space
106. origin of dimensional frame
107. Centre of cube
108. The set up of 'cube'
109. Complete set up of cube
110. corner points
111. edges
112. surfaces
113. volumme
114. structural components
115. geometric components

Lesson - 02

- 25. Geometric envelope
- 26. The structural set up of cube
- 27. corner points
- 28. edges
- 29. surfaces
- 30. volumme
- 31. axes
- 32. origin
- 116. structural components
- 117. domain part.
- 118. geometric envelope for the domain
- 119. devoid of length
- 120. devoid of length, breadth
- 121. devoid of length, breadth and height
- 122. devoid of volumme.
- 123. Single dimensions
- 124. Pair of dimensions
- 125. All the three dimensions
- 126. interval, square and cube
- 127. end points
- 128. side of a Square
- 129. artifices of numbers
- 130. 26 primes
- 131. parallel formats
- 132. organization format
- 133. three dimensional frame of half dimensions.
- 134. 'Trishapta

- 135. Vedic Systems
- 136. 3-space content
- 137. 3-space bodies.
- 138. 8 sub cubes
- 139. 8 octants
- 140. 4-space (\mathbb{I}^4)

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Lesson - 03

- 141. 7 versions of cube
- 142. spatial boundary’.
- 143. 2-space content.
- 144. zero area point
- 145. six surface plates.
- 146. ‘interval’.
- 147. ‘square’
- 148. signatures as mark of presence
- 149. 7 geometrics of 3-space
- 150. First set of triple plates
- 151. Second set of triple plates .
- 152. dual status
- 153. zero signature geometry
- 154. middle placement geometry

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Lesson - 04

- 150. Eight octant
- 151. cut of 3-space
- 152. corner points
- 153. three dimensional frame of half dimensions.
- 154. edges
- 155. synthetic joint at its middle of the edge
- 156. half dimensions
- 157. synthetic set up of a pair of half dimensions
- 158. full dimension.
- 159. four quarters.
- 160. Split of surface plates
- 161. point of the edge as origin three dimensional frame
- 162. each point of edge is origin of a two dimensional
frame
- 163. collapse of corner points
- 164. compactification of origins
- 165. compactification Phenomenon
- 166. internal corner point of sub cubes
- 167. release of 4-space at origin of 3-space

Lesson - 05

80. Nine points fixation of a cube
81. Fixed states
82. wholesome unit.
83. Middle points of edges
84. centres of surfaces
85. ninth three dimensional frame
86. hyper cube 4
87. 9 versions of hyper cube 4.
88. Spatial order
89. four spatial dimensions.
90. 8 solid boundary components
91. linear order
92. Pair of three dimensional frames of half dimensions
93. centers of 8 sub cubes
94. cube synthesized as 8 sub cubes.
95. synthetic cube
96. ninth sub cube.
97. dynamic state.
98. fifth quarter square
99. third half of interval
100. artifices of numbers
101. dimensional bodies.

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Lesson - 06

168. *Ten Directional frame*
 169. volume
 170. space within boundary
 171. geometric envelope of cube
 172. external set ups of cube
 173. internal set ups of cube
 174. three dimensional frame with
 175. four internal diagonals
 176. eight octants formats
 177. ions flow from center
 178. ascendance of solid order
 179. transition and transformation of role of 3-space
 180. dimensional synthesis Phenomenon at work.
 181. pair o linear dimensions
 182. pair of solid dimensions
 183. transcendental (5-space) order.
 184. Triloki sustained by Trimurti.

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Lesson -8

Introductory and first phase of Intelligence Growth

Introductory

15. Intelligence growth is essentially consciousness based.
16. Consciousness expresses itself as consciousness field within 'mind'.
17. It is at the origin of consciousness field that intelligence values manifest themselves.
18. This manifested intelligence domain marks its physical presence in 'brain'.
19. It is flow of intelligence as intelligence bits from brain to different organs of body, which is recognized as functional intelligence.
20. This whole process from emergence of consciousness field to actuated functions of body is the Phenomenon of 'Jyoti'.
21. In the context of solar universe, Jyoti expresses itself as Parkash (light).
22. It is the Mathematics, Science & Technology of Sunlight, which that way becomes the Discipline of 'Sunlight' which formats consciousness field through sixth chakra of human body.
23. The format, organization and values of sixth chakra of human body is parallel to the format of hyper cube 6.

24. It is further parallel to the format, organization and values of Sun.
25. It is still further parallel to the values and virtues of Vishnu lok
26. As such it becomes the solemn duty of parents and teachers to help children to develop their intelligence growth in gentle steps.
27. And in a most natural way following the values of Ganita Sutras, of which first four namely Ganita Sutras 1 to 4 may be taken as the source of first phase growth steps for intelligence growth.
28. It becomes humble duty of each one of us to ensure that our children acquire intelligence growth in most natural way.

Intelligence growth

First phase

10. Intelligence growth is a sequential process.
11. It deserves to be approached phase wise.
12. First phase of intelligence growth is to avail format of Ganita Sutras 1 to 4.
13. The organization of Ganita Sutras as such is of many layers.
14. These layers are in compactified form.
15. These being in compactified form, same accordingly unfold sequentially.
16. Therefore the first phase of intelligence growth is to be approached as chase of five folds (Panchvritya) / (पंच:वृत्तया).
17. The four steps of intelligence growth shared already are of values
 - v. Counting (direct and reverse), with and without jumps. Counting with pebbles and sticks /points and lines
 - vi. Counting along all the ten directions.

- vii. Working with a pair of lines, as angle, as parallel lines as one of the lines being fixed and other being in motion.
- viii. Synthetic set up of objects and images / reflection operation
As such, is just the first fold of the first phase of intelligence growth.

18. The second fold of first phase of intelligence growth would be of the format and values of arithmetic operations.

- v. Counting, as addition and subtraction
 - vi. Multiplication as repeated addition
 - vii. Division as repeated subtraction
 - viii. Reflection operation format for the organization of double digit numbers as under :
- 01 02 03 04 05 06 07 08 09
 10 11 12 13 14 15 16 17 18
 19 20 21 22 23 24 25 26 27
 28 29 30 31 32 33 34 35 36
 37 38 39 40 41 42 43 44 45
 46 47 48 49 50 51 52 53 54
 55 56 57 58 59 60 61 62 63
 64 65 66 67 68 69 70 71 72
 73 74 75 76 77 78 79 80 81
 82 83 84 85 86 87 88 89 90
 91 92 93 94 95 96 97 98 99

STEP-1 OF INTELLIGENCE GROWTH

ALONG FORMAT OF GANITA SUTRA-1

एकाधिकेन पूर्वेषु ।

Ekadhikena Purvena.

By One More than One before

11. Prime aim of schooling is to achieve proper intelligence growth for innocent young minds.
12. Basic value of Ganita Sutras is that these in most affine way and as most sublime steps always remain parallel to the intelligence field growth within frame of Human mind.
13. Here it is for the attention of teachers and parents that the initiation step (s) for intelligence growth as per the values of Ganita Sutras (and Upsutras) surface as:
 - V. Learning of counting (as value of Ganita Sutra-1): 'एकधिकेन पूर्वेण ।' / 'one more than before'.
 - VI. Learning of direct counting $1, 1+1=2, 2+1=3$, to be supplemented by reverse counting as per the value of Ganita Sutra 14 (एकन्यूनेन पूर्वेण) / 'one less than before'.
 - VII. Learning of direct counting as well shall be supplemented by counting by jumps as per the symmetry value of Ganita Upsutra-1 (आनुरूष्येण): $(1, 3, 5, \dots); (2, 4, 6, \dots), \dots$.
 - VIII. The direct counting by jumps to be supplemented by reverse counting by jumps $(10, 8, 6, \dots); (11, 9, 7, \dots)$,
14. Further as per the value of simultaneous addition and subtraction of Sutra 7 'संकलव्यवकलनाभ्याम् ।', the counting skills shall be perfected by all types of counting steps of direct counting and reverse counting, with single, double are more jumps to be handled mentally.
15. To start with one shall remain at direct counting and reverse counting. At next phase direct counting with jumps and reverse counting with jumps be introduced. It is only thereafter that the mental processing of simultaneous addition and subtraction be introduced.
16. Young innocent minds have unbiased memory. As such above counting processes be introduced very gently. Once

the values of these counting processes would stand absorbed by young minds, the process of initiation of intelligence growth would take place of its own.

17. Parents particularly mothers during informal days of learning of children can attain wonders in his direction for their children.
18. During formal education the responsibility would be of teachers to attain all this for young minds.
19. The intelligence growth is a continuing process and same is of the steps parallel to values of Ganita Sutras 1 to 16 and Upsutras 1 to 13. As such parents and teachers shall help the children to memorize this small text.
20. Once this text stands memorized rest would be just a mental processing values Mathematics.

Let us recapitulate step 1 for intelligence growth.

- III. I. Direct counting (1, 2, 3, ----) Direct counting with jumps (1, 3, 5, 7, -----), (2, 4, 6, 8, -----)
- IV. II. Reverse counting (---, 10, 9, 8, ---)
- III. Reverse counting with jumps (-----, 10, 8, 6, ---), (-----, 11, 9, 7, ---)

STEP – 2 FOR INTELLIGENCE GROWTH

ALONG THE FORMAT OF

GANITA SUTRA-2

निखिलं नवतश्चरमं दशतः ।

Nikhilam Navatascaramam Dasatah

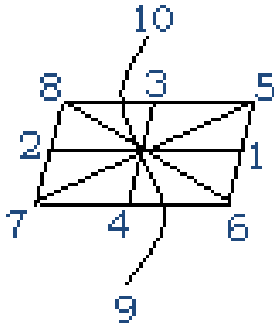
All from 9 and the last from ten

- VI. Transit from single digit values to double digit values (i.e. from (1, 2, 3, 4, 5, 6, 7, 8, 9) to (01, 02, 03, 04, 05, 06, 07, 08, 09)
- VII. (01 and 10) constitute a reflection pair as 0 and 1 digits are swapping their places.
- VIII. Expose young minds to reflection pairs of double digit numbers like (01, 10), (02, 20), (03, 30), ---- (12, 21), (13, 31), ----
- IX. Transit parallel to transition from Sutra-1 format to Sutra – 2 format from single direction to ten directions set ups.
- X. It is the duty of the parents and teachers to very gently expose the young minds to ten directions set up. The start may be with east (iwoZ) and then to sequentially expose to west (if'pe) and so on. This exposure will set a proper directional frame for growth of intelligence for the young minds.

Recapitulation of step 2 of intelligence growth

- V. Focus is to be given upon transition from numerals 1 to 9 to number 10.

- VI. Further focus is to be given that double digit numbers on replacement of their digits make reflection pair of numbers like (01, 10), (02, 20), ---- (89, 98)
- VII. Here it should be brought to conscious notice that difference of values of reflection pairs i.e. $10-01 = 09 = 1 \times 9$, $20 - 02 = 18 = 2 \times 9$, $30-03 = 27 = 3 \times 9$, --- are multiples of nine.
- VIII. Here further young mind be exposed to ten directional set up for the space.



STEP – 3 FOR INTELLIGENCE GROWTH

ALONG THE FORMAT OF

GANITA SUTRA-3

□ ध्वत्तर्यग्भ्याम् ।

Urdhva tiryagbhyam

Vertically and crosswise

IX. The focus of ten directional frame upon ten direction of single lines formats.

X. As such for intelligence growth of young minds and to ensure that young minds are not getting mental blockade of the format of a line, here would be a phase and stage of exposure of the young minds of working with a pair of lines.

XI. It would be a transition step from Ganita Sutra 2 to Ganita Sutra 3.

XII. The working with pair of lines shall be focused at the stage as a pair of orbs of an angle.

XIII. The surface / area enclosed within pair of arms of an angle shall be helping young minds to get exposed to the set ups of surfaces.

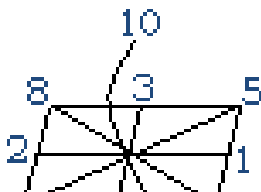
XIV. Further working with pair of lines will help the young minds to transit from counting with the help of pebbles (points) to counting with the help of sticks (lines).

XV. Sequentially pair of lines as parallel lines, as equal lines as unequal lines as angles as a vertical line and as diagonally (crosswise) line will mature the child for new values of intelligence.

XVI. Thereafter one of the lines being fixed and other line in motion shall be helping reach at conics and all that.

STEP – 4

FOR INTELLIGENCE GROWTH



ALONG THE FORMAT OF

GANITA SUTRA-4

परावर्त्यं योजयेत् ।
Paravartya Yojayet
 Transpose and Apply

17. Vedic Systems accept mirror as a basic instrument for 'reflection operation'.
18. Reflection is an independent operation.
19. Reflection operation is an additional Mathematical operation.
20. Reflection operation becomes the fifth arithmetic operation.
21. It becomes responsibility of parents and teachers to properly educate young minds about this reflection operation.
22. Better, reflection operation can be taught with the help of a mirror.
23. The features of reflection operation deserve to be distinctively exposed in reference to other four arithmetic operations, namely: (i) Addition operation (ii) subtraction operation (iii) multiplication operation (iv) division operation.
24. One way to teach to focus different operations of reflection operation is to handle it with the help of a pair of sticks (lines).
25. The pair of sticks may be designated as object stick (o stick) and image stick (I stick).
26. With its help the values 01 and 10 can be demonstrated for reaching at reflection pair of numbers (01, 10).
27. Further with it be demonstrated the reach at (01, 10) as '11'.
28. At next phase, mirror as synthesis glue / joint for objects and images, may be introduced.

29. Such synthesized set ups of objects and images to be chased again in terms of the values of counting as addition.
30. Further chase would be along place value format.
31. Still further chase would be as a pair of parts of whole.
32. Still further its chase is to be as a pair of faces of a surface.



Lesson -9**Intelligence growth****Second phase****Step 1 Transition from 1 to 0****and back from 0 to 1****Recapitulation**

19. The second phase of intelligence growth may be taken as centered around the comprehension of zero.
20. The first phase of intelligence growth, as such, may be taken as centered around comprehension of '1'.
21. For smooth intelligence growth, one shall very gently transit from comprehension of 1 to comprehension of 0.
22. For perfection of this transition, one shall equally, gently transit from the comprehension of zero to comprehension of one.
23. It is this two fold approach of transition from one to zero and from zero to one, which shall be helping enrich the intelligence growth process.
24. The intelligence, essentially is in the smooth transition formats.
25. The transition formats provide continuity.
26. It in a way shall be manifesting as features of relationships.

27. The gaps between two comprehension values would get bridged only in terms of the relationships of two values.
28. Pair of values together with their relationships would be making the intelligence range of the values.
29. It is this values range which shall be creating intelligence unit. These intelligence units as intelligence bits shall be in their collectivity creating intelligence field.
30. Therefore heavy responsibility lies upon the parents and teachers to very gently help young minds to enliven their intelligence field as their own creativity efforts of consciously bridging the gap of 1 and 0 and back from '0 to 1'.
31. It is going to be very big step towards the Phenomenon of intelligence growth for the young minds.
32. One shall ever remain conscious of this Phenomenon. It is in terms of it that take off takes place for the breakthrough from the discrete intelligence bits to continuous intelligence field zones.
33. The values of 0 and 1, may be worked out for comprehension of young minds and in terms of the same it may be demonstrated as to how differently these values behave.
34. Illustratively $0 + 0 = 0 = 0 - 0 = 0 \times 0 = (-0) \times (-0)$.
35. However $1 + 1 = 2$, $1 - 1 = 0$, $1^1 = 1 = 1 / 1 = 1^{-1} = 1^n = 1^{-n}$.
36. Further also that $0^1 = 0 = 0^1 = 0^n = 0^{-n} = 0 - 0 = 0 + 0$.

Intelligence Growth

Second phase

Step -2

Transition from 1 to 0
and back from 0 to 1

Bridging the Gap

36. Bridging the gap between the pair of values say (0) and (1), is all intelligence is about.
37. Young minds can be helped understand all about it for its appreciation and imbibing and in the process, of its own, acquiring intelligence.
38. One way to help the young minds to learn and comprehend this process would be to stand at a distance from a wall and throw a ball to strike the wall.
39. The place of standing be given the value '0' and the place of wall be given the value '1'.
40. Child be made conscious as that after the ball strikes the wall, it starts coming back and that all it is because of the wall.
41. The child be further made conscious that if wall would not have been there, then the ball would have gone ahead.
42. The child be further made conscious as that the point ahead of the wall (uptill which the ball would have reached in the absence of the wall) may be taken as value (2).
43. Child be further made conscious that the point uptill which the ball had returned because of the wall, can be attached value (2), taking into be that it is because of the absence of the wall
44. The placement of value '2' in between values 0 and 1 and the transformation of the triple (0, 1, 2) as (0, 2, 1) is big step of understanding and comprehension.
45. It is this comprehension which deserve to be emphasized.

46. In general it would be of the format $(n+0, n + 1, n + 2)$ transiting into $(n+0, n + 2, n + 1)$
47. This Phenomenon leads to a very rich format of features, sequentially young minds deserve to be exposed to the spectrum of values of this format.

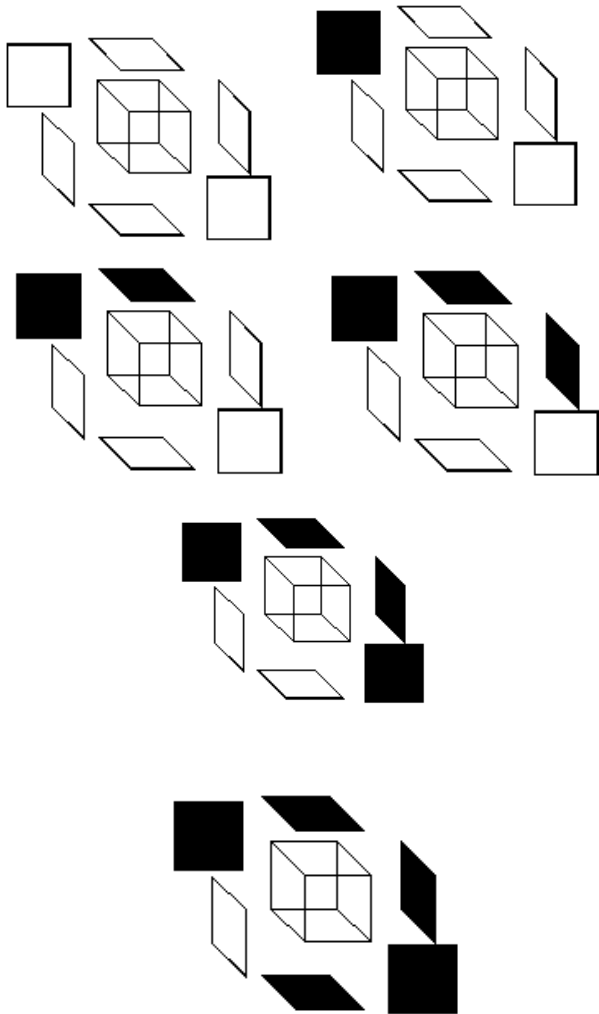
Step 3

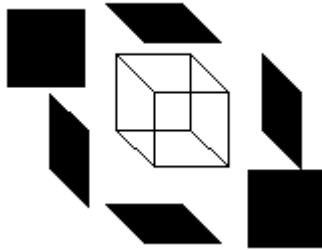
Completeness and incompleteness

8. Completeness and incompleteness is the concept which deserve to be very gently exposed to young minds with the help of a line by striking out one of its point making a split for the line.
9. It should be emphasized as that even the single point of the line by its absence (removal) makes the completeness of the line and incomplete one.
10. It is this difference of single point which makes the completeness, and incomplete.
11. The void created by single point absence matters for the completeness / fullness of the line.
12. Like that the concept of completeness and incompleteness can be demonstrated by removal of a thread (line) from cloth (sheet) / surface.
13. The split of solid / cube with / in terms of the 'inbetween surface' would be another demonstration of completeness (vis-à-vis) incompleteness.
14. Close interval (interval with its both ends point intact as a complete set up will lead to incomplete set up by removal of even one of the

end points of the interval which shall be making close interval into half close interval.

48. The concept of 'completeness and incompleteness', in reference to interval as above, that way shall be leading to three versions of interval namely (i) close interval with its both end point intact, (ii) half closed interval with its only one end point intact, and (iii) open interval with its both end points missing.
49. The open interval, will permit its split into a pair of intervals, with one of them being the open interval and other being half closed / half open interval.
50. The concept can be demonstrated further in respect of surfaces /squares by demonstrated that there would be five versions of square namely (i) square with all the four boundary lines intact (ii) square with only three boundary lines intact (iii) square with only two boundary lines intact (iv) square with only one boundary line intact and (v) square with its all the boundary lines missing.
51. The presence of end points of an interval and of boundary lines of square, as such be taken as the signatures (presence of boundary components and in terms thereof the concept of version of square / geometry of 2-space may be introduced.
52. A step ahead the concept may be further demonstrated in reference to the set up of the cube being of 7 versions of 7 three space geometries of 6, 5, 4, 3, 2, 1, 0 versions / presence of the surface plates of the cube.





Lesson -10

Intelligence growth

Third phase

Step 1

Unit, length and infinity of points

Recapitulation

17. First phase of intelligence growth avails (i) as arithmetic value (ii) phase second of intelligence growth avails values '0' as algebraic entity.
18. The present third phase of intelligence growth avails format of unit length as infinity of points.

Third phase

19. Young minds shall be very gently expose to value '1' as unit length and value '0' as single point.
20. Further unit length shall be chased as a set of infinity number of points.
21. It would be a static state for light as a set up of points.
22. Further line be taken as format of a moving point.
23. The coverage of line as a moving point is a feature which transits from static state of line as an infinity number of points to line as a track of moving point
24. It in a way transition from static state to a dynamic state.
25. One may have a pause here and make the young mind conscious of point as a zero space body in a dynamic state tracking as a 1-space body.
26. One may further have a pause here and the young mind be further made conscious of point as zero space body being the boundary component of line as 1-space body as domain accepting 0-space body at its boundary.

27. From this stage, young mind be very gently and in a sequential steps be exposed to 1-space body (line) being at the boundary of 2-space body / square.
28. Here, the young mind be further made conscious as that square / surface in its static state is a set of an infinite number of lines.
29. Further as that square / surface is a track of a moving line.
30. A step ahead young mind be exposed to surfaces being at the boundary of solids / cube / 3-space bodies.
31. Here as well young minds be very gently made conscious and expose to the static state and dynamic state of cube / solids / 3-space bodies.
32. A step further the static and dynamic state of 4-space bodies / hyper cube 4 being exposed with the help of cubes / solids / 3-space bodies.

Step 2

To knockout a point from unit length

15. Young minds shall be very gently exposed to the knocking out of a point from the unit length.
16. This may be demonstrated with the help of number of balls set adjacent to each other as a row.
17. Any ball of in between placement be very gently lifted out without disturbing the placements of the other balls of the row.
18. With the removal of one ball, the row would split as a pair of rows with the gap in between.

19. This split of a row into a pair of rows because of removal of one ball deserve to be comprehended well
20. Slowly the length of the original row be made large, and very large to symbolize it as an infinite row.
21. With its help, it be focused for the conscious attention of young mind that one infinite row split itself as a pair of infinite rows.
22. At this point of focus, the consciousness of young mind be further constructed upon the features as that line duplicate itself as a pair of lines, infinite line as a pair of infinite lines.
23. One may have a pause here and make the young mind further conscious as that how with removal of '1', infinity is leading to pair of infinites.
24. Here further very gently the young minds be further made conscious as that point as zero space body when knocked out of unit length, it makes unit length deficient of just a zero value point and still is capable of transforming infinity as a pair of infinites.
25. Here, further very gently, attempt be made that young minds start comprehending point / 0-space body / value '0' and line / 1-space body / value '1' acquiring identical formats and roles.
26. It is a very gentle exercise. It is a very delicate comprehension.
27. It is sublime step.
28. It is a virtuous growth of intelligence to handle 1 and 0 on identical formats and that too has a process of making infinity deficient of its single component.

Step 3

Part as a whole

To knockout a point from unit length

9. Young minds deserve to be exposed very gently about the concepts of Equality and of being Big and Small.
10. This may be demonstrated with the help of our popular symbol of equality (=).
11. Here focused attention of young minds be made consciousness centric as that the symbol of equality avails a pair of parallel lines of equal length.
12. One may have a pause here and make young minds further conscious of equality in terms of lengths of lines.
13. Further here, it be demonstrated with the help of sticks as of lines formats of different lengths as that there exists big and small sticks (lines).
14. One may have a pause here and have a fresh look at the set ups of lines.
15. Every line is a set up of infinite number of points.
16. Line, may be big or small, is a set up of infinite number of points.
9. One may shall further have a pause here and young mind be made conscious as that line may be big or small in terms of its length (s) but the same being always a set of an infinite number of points, so infinity (number of points) being a unit shall be making each line big or small being equal as per the unit of infinite points.
10. This is a very delicate appreciation.
11. Its comprehension as well, as such, becomes equally delicate aspect.
12. Infact, here a pair of units are at work.
13. First unit at work is of length as a unit.

14. The second unit at work is of infinity number of points.
15. One may further have a pause here and to bring to the focused attention of young minds that when this concept is work further in the context of surfaces, it shall be bringing to focus parallel features.
16. Here in the context of surfaces, 'area unit' may be taken in place of the length unit in reference to lines.
17. One may have a pause here and bring to the pointed attention of young minds as that a line, how so ever big it may be is devoid of an area.
18. This being so line is accepting zero area value.
19. This zero area value of line, that way brings in second unit in reference to surfaces.
20. Infinite number of lines as a unit and unit area, that way gives us a pair of units for appreciation of set up of surfaces.
21. The unit area (howsoever small area may be) is going to be a set up of infinite number of lines (as infinite number of zero areas).
22. As such the surfaces may be big or small but each surface becomes a set up of infinite number of lines and as such become equal in reference to unit of infinite lines.
23. One may further have a pause here and to impress upon the young minds to extend the above pair of units approach to lines and surfaces to the solids as solids and surfaces.
24. One shall further have a pause here and to consciously make them of focused attention for working with a pair of units of two consecutive dimensional bodies like (points, lines), (lines, surfaces), (surfaces, solids), (solids, hyper solids).
25. The concept of part being equal to whole, deserve to be comprehended well for its thorough appreciation and full imbibing for proper insight.

26. It is this insight imbibing, appreciation and comprehension of the concept of big and small parts still being equal in the context of the constituents of the previous dimensional bodies will provide a breakthrough for the intelligence growth and same deserve to be attained consciously.

Step 4

Part as a whole

Fractions of unit and numerals of place value system

10. Young minds shall be very gently exposed to fractions of a unit.
11. Unit shall be accepting double format.
12. As in case of a line, first format would be of length and second format would be of points.
13. To approach fraction of a unit, as such accordingly would be to avail a pair of formats.
14. Taking '10' as a unit and 1 to 9 as numerals of ten place value system, the concept of both of the formats standing satisfied in respect of it, is a very delicate aspect and concept.
15. Heavy responsibility lies upon the parents and teachers to expose young minds to the above aspects of above concept with very gentle steps.

16. One way would be to approach parts of the units as fractions.
17. In the context the second format of the unit in terms of constituent of the unit would takes us parallel to numerals of place value system.
18. Here would follow the concept of expression for the fractions in the format of equivalent decimal expressions.
15. Further, parallel to ten place value system, there would be number of situations of other place value system as well.
16. No doubt, it would be a very delicate approach require to work with all types of place value systems.
17. However once one comprehends well working with ten place value system, transition may be had for other place value system as well.
18. But this should be attempted one by one, say first of all one may shift from ten place value system to nine place value system then to eight place value system and so on.
19. Ganita Sutra 12 may help perfect the intelligence at this phase and stage of growth of intelligence.



Lesson 11

Intelligence Growth

Fourth phase

5. We reach fourth phase of the intelligence growth steps.
6. This phase of intelligence growth as well is of four steps, namely:
 - v. Reach from the present stage to previous state as well as to the future state
 - vi. Unfolding of the existing state for its reach to previous state as a sequential reach.
 - vii. To have sequential increase of intelligence growth
 - viii. To intensify the intelligence growth.
7. These four steps of intelligence growth of the present fourth phase is parallel to Ganita Sutras 13 to 16 respectively.
8. The formats and working values of Ganita Sutras 13 to 16 may be availed for intelligence growth steps of the present phase.

First step

Reach from the present stage to previous state as well as to the future state

2. This step of intelligence growth as first focus upon the existing intelligence state.

10. It is only with proper evaluation of the existing state of intelligence that further steps can be planned.
11. To have evaluation of the existing state of intelligence, in itself is a very delicate exercise.
12. This being so, the parents and teachers undertaking the exercise to help young minds to have proper intelligence growth shall come up to the expectations of capacities to have evaluation of existing state of intelligence.
13. For it, one way would be to see the degree of success with which the child reaches back to the previous stage of learning.
14. It is the degree of ease with which the child can reach the previous stage of learning, the same shall be going to be the intelligence index of the child.
15. This way going sequentially back will provide a parameter for the intelligence index.
16. This parameter can be sequentially applied for going back and coming forward from the previous states to the existing state of intelligence.
17. It is this two fold approach of going back as well as coming forward, which can be availed for the ensured sequential progression for the intelligence growth.
18. The parents and teachers may expose the young minds to the format and values of Ganita Sutra 13.

Second step

Unfolding of the existing state for its reach to previous state as a sequential reach.

20. The reach from existence state, on its either side, that is towards previous state as well as towards future state, may appear to be of parallel formats and values but infact, it is not so.
21. This being so, heavy responsibility lies upon the parents and teachers accepting the responsibility to expose young mind in such a way that there is appropriate intelligence growth without any stretch upon the innocence of mind.
22. One way to initiate such exposure would be with the help of the format and values of a line / interval.
23. Going from one end of the interval to other end of the interval and the reverse reach from the second end of the interval to the first end of interval are of opposite orientations.
24. Taking first orientation as +1 and second orientation as (-1), we can explore the formats and values further.
25. +1 orientation is like a line which permits sequential progression as per the working rule 'one more than before' of Ganita Sutra 1.
26. The second orientation as such is also of line format but accepting sequential progression as per the rule (one less than before) formulation of Ganita Sutra 14.
27. For further comprehension and insight, let us revisit artifices pair (+1, -1).
28. Parallel to this artifices pair (+1, -1) is spaces pair (+1 space, -1 space).

29. For further insight let us revisit pair of spaces (+1 space, -1 space) in reference to their simultaneous roles as domain fold, dimension fold.
30. One may have a pause here and permit the transcending mind to continuously remain in prolonged sitting of deep trans and to glimpse the differences of values and virtues of +1 space as domain fold and -1 space ad dimension fold of hyper cube 1, and in general in respect of hyper cube n.
31. The emerging delicate differentiating values and virtues formulation format of Ganita Sutra 1 deserves to be emphasized well.
32. For this need would be that above differentiation of format and values shall be visited and revisited time and again.
33. This way it is the proper comprehension, due appreciation, desirable imbibing only shall be enriching the insight about the steps of reaching back from existing state to the previous state.
34. Young minds shall be helped very gently with the help of formats, values and virtuous of Ganita Sutra 1 and Ganita Sutra 14
35. Let young minds shall be made conscious and to be properly alerted as that +1 (space) leads to domain fold while (-1) space leads to dimension fold.
36. The young minds shall also be properly exposed the difference of +1 space and -1 space.
37. Parallel to it there should be proper exposure about the difference of +1 and -1 artifices which comes to be $(+1 - (-1)) = 2$.
38. Some hint may be given of transition from the order of linear order mathematics to spatial order Mathematics.

Third Step

**To have sequential increase
of intelligence growth**

10. Vridhi and Guna are two basic features. Young minds shall be very gently exposed to these conceptual terms / features.
11. One way to approach this pair of terms is to go parallel to features of addition and multiplication.
12. Addition leads to and avails formats and features of sequential progression as increase.
13. This, this way makes it parallel to a linear order.
14. The operation 'multiplication' leads to and covers a format of features parallel to 'powers'.
15. Vridhi and Guna as parallel to addition and multiplication may also be approached as addition at the base and addition at the index.
16. Further these can be respectively approached parallel to dimension fold progression and domain fold progression.
17. Here the concept term 'इत्' as well be introduced 'to remove'.
16. The term 'इत्' shall be very gently exposed with the help of 2-space / plane / surface within two dimensional frame.
17. It would be amounting to that 2-space set up is reduced into two dimensional frames.
18. The composite term 'xqf.kr' be approached as the set up being reduced to its constituents draft off properties.
19. It in a way would amount to reaching at the affine state of the constituents.

20. It is the collectivity of affine state constituent which be handled with perfection (of intelligence).
21. This phase and stage of intelligence growth handling affine state constituents with perfection makes the intelligence growth as well of perfection reach.
22. It is this perfection reach, with which affine state constituent can be handled is the attainment for the young minds being fulfilled with perfection state of intelligence growth.
18. Parents and Teachers can avail the format and features of Ganita Sutras 15 for such attainments for the young minds.

Fourth step

To intensify the intelligence growth

25. Here we reach last step of fourth phase of steps of intelligence growth along the formats of Ganita Sutras 1 to 16.
26. It may be recapitulated that the format and values of Ganita Sutras 1 to 15 have been availed uptill this phase and stage of steps for intelligence growth.
27. It may further be recapitulated that in the previous steps the format and values of Ganita Sutra 15 have been availed.
28. Ganita Sutra 15 text avails the basic formulation 'गुण'.
29. Ganita Sutra 16 text avails this formulation.

30. Ganita Sutra 15 text avails the formulation 'गुणित' while Ganita Sutra 16 avails the formulation 'गुणक'.
31. The format and values of Ganita Sutra 15 are the chase of virtue of affine status of the constituent of wholeness by reaching at wholeness being dreft of features (गुणा).
32. The present text of Ganita Sutra 16 avails the formulation 'गुणक' which as such leads to formatting of features 'गुणा' within and as the set up of the first varga consonant 'क'.
33. The format values and features of letter 'क' are of the order of 'क ब्रह्मा' Ka Brahma and 'क शिव्' Ka Shiv

'क ब्रह्मा' Ka Brahma and 'क शिव्' Ka Shiv

34. 'क ब्रह्मा' Ka Brahma is of the format, values and virtues of Lord Brahma, the presiding deity of real 4-space which is of a spatial order.
35. 'क शिव्' Ka Shiv is of the format, values and virtues of Lord Shiv, the presiding deity of real 5-space which is of a solid order.
36. As such one may have a pause here and young minds be very gently exposed to this compactified states of manifested creations permitting transcendence therefrom from creator's space (4-space) to transcendental (5-space) space.
37. With it one shall further have a pause here and very gently expose them to this format of creations having transcendental base and making it of values and virtues of transcendence permissibility from spatial order creation format of 4-space to solid order transcendence range of the transcendental domains base of creation.

38. One may further have a pause here and permit the transcending mind to continuously remain in prolonged sitting of deep trans and to see that this reach from 4-space to 5-space, as such shall be leading us ahead to 6-space.
39. It is the achievement.
40. It is the attainment of the perfection of intelligence parallel to the format of organization of Ganita Sutras 1 to 16.
41. The above sequential order of reach from 4-space to 5-space and ahead from 5-space to 6-space shall be leading us back to the working rule of Ganita Sutra 1 'one more than before'.
42. With it the whole system becomes cyclic.
43. The original initiation as artifices of numbers now takes us to the dimensional frames / dimensionalised spaces.
44. It is in this way that the intelligence field starts intensifying itself.
45. This being so the sequential chase again from Ganita Sutra 1 to Ganita Sutra 16 shall now giving us a reach for the dimensional based.
46. Here at this second round, Ganita Sutras shall be approached simultaneously along with Upsutras.
47. Here it would be relevant to note that Ganita Upsutra 1 is of the format and values of symmetry / proportionality / of form as it is and it shall be adding to our intensity of understanding and insight of first round reach in terms of artifices of numbers (Sankhiya Nishtha) and second round of reach in terms of dimensional spaces (Yoga Nishtha).
48. With it parents and teachers shall discharge their solemn responsibility for helping their children and students to have proper growth of their intelligence and intelligence field to be fulfilled with transcendental values of consciousness states.



Lesson -12

Fifth Phase

Intelligence Field

Dwitya Variti

द्वितीय वृत्ति

16. During प्रथम वृत्ति Parthma Vriti intelligence growth steps have been chased parallel to the formats and values of Ganita Sutras 1 to 16.
17. This chase had brought us phase to phase with the way Ganita Sutras 1 to 16 at phase and stage of Ganita Sutra 16 takes us back to Ganita Sutra 1 as a sequential continuity like that of circumference of a circle and the organization of Ganita Sutras as such becomes of cyclic features.
18. Accordingly the attainment of intelligence growth of above steps attains perfection of cyclic features of sequentially intensifying itself as intelligence field of the set up of sequential cyclic phases.
19. It is like the surface permitting chase as concentric circles.
20. The second round of chase of intelligence growth, as such becomes the chase of intelligence field. During the first round of chase of intelligence growth

the help was taken of the formats of artifices of numbers being the mathematical entities.

21. During present second round of chase of intelligence growth as intelligence field is to avail the dimensional frames has mathematical entities.
22. Here it would be relevant to note that to establish processing processes of Vedic Systems are (1) Sankhiya Nishtha and (2) Yoga Nishtha.
23. Sankhiya Nishtha avails artifices of numbers presuming the existence of dimensional frames.
24. Yoga Nishtha avails dimensional frames presuming the existence of artifices of numbers.
25. With it, the second round of chase of intelligence growth as intelligence field, that way goes to the base of artifices of numbers.
26. This geometric base is to be approached as sequential organization of dimensional frames.
27. Ganita Sutra 1, as such in terms of its working rule 'one more than before', that way takes us from 1-space to 2-space and further from the role of 1-space as dimension to 2-space with the role of dimension.
28. Here it also would be relevant to note that to intensify the intelligence growth, Sutras are going to be of great help.
29. As such, the sadkhas shall simultaneously chase Ganita Sutra 1 and ganita Upsutra-1, the working rule one more than before of Ganita Sutra 1 together with the working rule of symmetry / proportionality / following the form as it is, together shall be providing the desired breakthrough and

initiation for intensifying the intelligence growth and the smooth evolution of the intelligence field.

30. One shall sit comfortably and permit the transcending mind to continuously remain in prolonged sitting of deep trans to simultaneously workout Ganita Sutra 1 and Ganita Upsutra 1 and acquire proper insight of initiation of evolution of intelligence growth.



Lesson -8

Introductory and first phase of Intelligence Growth

Introductory

29. Intelligence growth is essentially consciousness based.
30. Consciousness expresses itself as consciousness field within 'mind'.
31. It is at the origin of consciousness field that intelligence values manifest themselves.
32. This manifested intelligence domain marks its physical presence in 'brain'.
33. It is flow of intelligence as intelligence bits from brain to different organs of body, which is recognized as functional intelligence.
34. This whole process from emergence of consciousness field to actuated functions of body is the Phenomenon of 'Jyoti'.
35. In the context of solar universe, Jyoti expresses itself as Parkash (light).
36. It is the Mathematics, Science & Technology of Sunlight, which that way becomes the Discipline of 'Sunlight' which formats consciousness field through sixth chakra of human body.
37. The format, organization and values of sixth chakra of human body is parallel to the format of hyper cube 6.

38. It is further parallel to the format, organization and values of Sun.
39. It is still further parallel to the values and virtues of Vishnu lok
40. As such it becomes the solemn duty of parents and teachers to help children to develop their intelligence growth in gentle steps.
41. And in a most natural way following the values of Ganita Sutras, of which first four namely Ganita Sutras 1 to 4 may be taken as the source of first phase growth steps for intelligence growth.
42. It becomes humble duty of each one of us to ensure that our children acquire intelligence growth in most natural way.

Intelligence growth

First phase

19. Intelligence growth is a sequential process.
20. It deserves to be approached phase wise.
21. First phase of intelligence growth is to avail format of Ganita Sutras 1 to 4.
22. The organization of Ganita Sutras as such is of many layers.
23. These layers are in compactified form.
24. These being in compactified form, same accordingly unfold sequentially.
25. Therefore the first phase of intelligence growth is to be approached as chase of five folds (Panchvritya) / (पंच:वृत्तया).
26. The four steps of intelligence growth shared already are of values
- ix. Counting (direct and reverse), with and without jumps. Counting with pebbles and sticks /points and lines
- x. Counting along all the ten directions.

- xi. Working with a pair of lines, as angle, as parallel lines as one of the lines being fixed and other being in motion.
 - xii. Synthetic set up of objects and images / reflection operation
- As such, is just the first fold of the first phase of intelligence growth.

27. The second fold of first phase of intelligence growth would be of the format and values of arithmetic operations.

- ix. Counting, as addition and subtraction
- x. Multiplication as repeated addition
- xi. Division as repeated subtraction
- xii. Reflection operation format for the organization of double digit numbers as under :

01 02 03 04 05 06 07 08 09
 10 11 12 13 14 15 16 17 18
 19 20 21 22 23 24 25 26 27
 28 29 30 31 32 33 34 35 36
 37 38 39 40 41 42 43 44 45
 46 47 48 49 50 51 52 53 54
 55 56 57 58 59 60 61 62 63
 64 65 66 67 68 69 70 71 72
 73 74 75 76 77 78 79 80 81
 82 83 84 85 86 87 88 89 90
 91 92 93 94 95 96 97 98 99

STEP-1 OF INTELLIGENCE GROWTH

ALONG FORMAT OF GANITA SUTRA-1

एकाधिकेन पूर्वेषु ।

Ekadhikena Purvena.

By One More than One before

21. Prime aim of schooling is to achieve proper intelligence growth for innocent young minds.
22. Basic value of Ganita Sutras is that these in most affine way and as most sublime steps always remain parallel to the intelligence field growth within frame of Human mind.
23. Here it is for the attention of teachers and parents that the initiation step (s) for intelligence growth as per the values of Ganita Sutras (and Upsutras) surface as:
 - IX. Learning of counting (as value of Ganita Sutra-1): 'एकधिकेन पूर्वेण ।' / 'one more than before'.
 - X. Learning of direct counting $1, 1+1=2, 2+1=3$, to be supplemented by reverse counting as per the value of Ganita Sutra 14 (एकन्यूनेन पूर्वेण) / 'one less than before'.
 - XI. Learning of direct counting as well shall be supplemented by counting by jumps as per the symmetry value of Ganita Upsutra-1 (आनुरूप्येण): (1, 3, 5, ---); (2, 4, 6, ---), ---.
 - XII. The direct counting by jumps to be supplemented by reverse counting by jumps (10, 8, 6, ---); (11, 9, 7, ---),
24. Further as per the value of simultaneous addition and subtraction of Sutra 7 'संकलव्यवकलनाभ्याम् ।', the counting skills shall be perfected by all types of counting steps of direct counting and reverse counting, with single, double are more jumps to be handled mentally.
25. To start with one shall remain at direct counting and reverse counting. At next phase direct counting with jumps and reverse counting with jumps be introduced. It is only thereafter that the mental processing of simultaneous addition and subtraction be introduced.
26. Young innocent minds have unbiased memory. As such above counting processes be introduced very gently. Once the values of these counting processes would stand absorbed

by young minds, the process of initiation of intelligence growth would take place of its own.

27. Parents particularly mothers during informal days of learning of children can attain wonders in his direction for their children.
28. During formal education the responsibility would be of teachers to attain all this for young minds.
29. The intelligence growth is a continuing process and same is of the steps parallel to values of Ganita Sutras 1 to 16 and Upsutras 1 to 13. As such parents and teachers shall help the children to memorize this small text.
30. Once this text stands memorized rest would be just a mental processing values Mathematics.

Let us recapitulate step 1 for intelligence growth.

- V. I. Direct counting (1, 2, 3, ----) Direct counting with jumps (1, 3, 5, 7, -----), (2, 4, 6, 8, -----)
- VI. II. Reverse counting (---, 10, 9, 8, ---)
- III. Reverse counting with jumps (-----, 10, 8, 6, ---), (-----, 11, 9, 7, ---)

STEP – 2 FOR INTELLIGENCE GROWTH

ALONG THE FORMAT OF

GANITA SUTRA-2

निखिलं नवतश्चरमं दशतः ।

Nikhilam Navatascaramam Dasatah

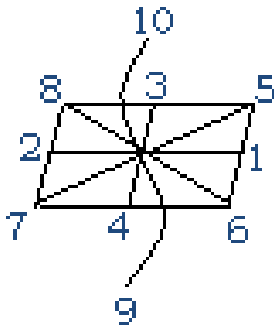
All from 9 and the last from ten

- XI. Transit from single digit values to double digit values (i.e. from (1, 2, 3, 4, 5, 6, 7, 8, 9) to (01, 02, 03, 04, 05, 06, 07, 08, 09)
- XII. (01 and 10) constitute a reflection pair as 0 and 1 digits are swapping their places.
- XIII. Expose young minds to reflection pairs of double digit numbers like (01, 10), (02, 20), (03, 30), ---- (12, 21), (13, 31), ----
- XIV. Transit parallel to transition from Sutra-1 format to Sutra – 2 format from single direction to ten directions set ups.
- XV. It is the duty of the parents and teachers to very gently expose the young minds to ten directions set up. The start may be with east (iwoZ) and then to sequentially expose to west (if'pe) and so on. This exposure will set a proper directional frame for growth of intelligence for the young minds.

Recapitulation of step 2 of intelligence growth

- IX. Focus is to be given upon transition from numerals 1 to 9 to number 10.

- X. Further focus is to be given that double digit numbers on replacement of their digits make reflection pair of numbers like (01, 10), (02, 20), ---- (89, 98)
- XI. Here it should be brought to conscious notice that difference of values of reflection pairs i.e. $10-01 = 09 = 1 \times 9$, $20 - 02 = 18 = 2 \times 9$, $30-03 = 27 = 3 \times 9$, --- are multiples of nine.
- XII. Here further young mind be exposed to ten directional set up for the space.



]

STEP – 3 FOR INTELLIGENCE GROWTH

ALONG THE FORMAT OF

GANITA SUTRA-3

□ ध्वत्तर्यग्भ्याम् ।

Urdhva tiryagbhyam

Vertically and crosswise

XVII. The focus of ten directional frame upon ten direction of single lines formats.

XVIII. As such for intelligence growth of young minds and to ensure that young minds are not getting mental blockade of the format of a line, here would be a phase and stage of exposure of the young minds of working with a pair of lines.

XIX. It would be a transition step from Ganita Sutra 2 to Ganita Sutra 3.

XX. The working with pair of lines shall be focused at the stage as a pair of orbs of an angle.

XXI. The surface / area enclosed within pair of arms of an angle shall be helping young minds to get exposed to the set ups of surfaces.

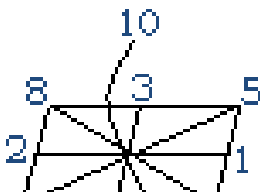
XXII. Further working with pair of lines will help the young minds to transit from counting with the help of pebbles (points) to counting with the help of sticks (lines).

XXIII. Sequentially pair of lines as parallel lines, as equal lines as unequal lines as angles as a vertical line and as diagonally (crosswise) line will mature the child for new values of intelligence.

XXIV. Thereafter one of the lines being fixed and other line in motion shall be helping reach at conics and all that.

STEP – 4

FOR INTELLIGENCE GROWTH



ALONG THE FORMAT OF

GANITA SUTRA-4

परावर्त्य योजयेत् ।
Paravartya Yojayet
 Transpose and Apply

33. Vedic Systems accept mirror as a basic instrument for 'reflection operation'.
34. Reflection is an independent operation.
35. Reflection operation is an additional Mathematical operation.
36. Reflection operation becomes the fifth arithmetic operation.
37. It becomes responsibility of parents and teachers to properly educate young minds about this reflection operation.
38. Better, reflection operation can be taught with the help of a mirror.
39. The features of reflection operation deserve to be distinctively exposed in reference to other four arithmetic operations, namely: (i) Addition operation (ii) subtraction operation (iii) multiplication operation (iv) division operation.
40. One way to teach to focus different operations of reflection operation is to handle it with the help of a pair of sticks (lines).
41. The pair of sticks may be designated as object stick (o stick) and image stick (I stick).
42. With its help the values 01 and 10 can be demonstrated for reaching at reflection pair of numbers (01, 10).
43. Further with it be demonstrated the reach at (01, 10) as '11'.
44. At next phase, mirror as synthesis glue / joint for objects and images, may be introduced.

45. Such synthesized set ups of objects and images to be chased again in terms of the values of counting as addition.
46. Further chase would be along place value format.
47. Still further chase would be as a pair of parts of whole.
48. Still further its chase is to be as a pair of faces of a surface.



Lesson -9**Intelligence growth****Second phase****Step 1 Transition from 1 to 0****and back from 0 to 1****Recapitulation**

37. The second phase of intelligence growth may be taken as centered around the comprehension of zero.
38. The first phase of intelligence growth, as such, may be taken as centered around comprehension of '1'.
39. For smooth intelligence growth, one shall very gently transit from comprehension of 1 to comprehension of 0.
40. For perfection of this transition, one shall equally, gently transit from the comprehension of zero to comprehension of one.
41. It is this two fold approach of transition from one to zero and from zero to one, which shall be helping enrich the intelligence growth process.
42. The intelligence, essentially is in the smooth transition formats.
43. The transition formats provide continuity.
44. It in a way shall be manifesting as features of relationships.

45. The gaps between two comprehension values would get bridged only in terms of the relationships of two values.
46. Pair of values together with their relationships would be making the intelligence range of the values.
47. It is this values range which shall be creating intelligence unit. These intelligence units as intelligence bits shall be in their collectivity creating intelligence field.
48. Therefore heavy responsibility lies upon the parents and teachers to very gently help young minds to enliven their intelligence field as their own creativity efforts of consciously bridging the gap of 1 and 0 and back from '0 to 1'.
49. It is going to be very big step towards the Phenomenon of intelligence growth for the young minds.
50. One shall ever remain conscious of this Phenomenon. It is in terms of it that take off takes place for the breakthrough from the discrete intelligence bits to continuous intelligence field zones.
51. The values of 0 and 1, may be worked out for comprehension of young minds and in terms of the same it may be demonstrated as to how differently these values behave.
52. Illustratively $0 + 0 = 0 = 0 - 0 = 0 \times 0 = (-0) \times (-0)$.
53. However $1 + 1 = 2$, $1 - 1 = 0$, $1^1 = 1 = 1 / 1 = 1^{-1} = 1^n = 1^{-n}$.
54. Further also that $0^1 = 0 = 0^1 = 0^n = 0^{-n} = 0 - 0 = 0 + 0$.

Intelligence Growth

Second phase

Step -2

Transition from 1 to 0
and back from 0 to 1

Bridging the Gap

53. Bridging the gap between the pair of values say (0) and (1), is all intelligence is about.
54. Young minds can be helped understand all about it for its appreciation and imbibing and in the process, of its own, acquiring intelligence.
55. One way to help the young minds to learn and comprehend this process would be to stand at a distance from a wall and throw a ball to strike the wall.
56. The place of standing be given the value '0' and the place of wall be given the value '1'.
57. Child be made conscious as that after the ball strikes the wall, it starts coming back and that all it is because of the wall.
58. The child be further made conscious that if wall would not have been there, then the ball would have gone ahead.
59. The child be further made conscious as that the point ahead of the wall (uptill which the ball would have reached in the absence of the wall) may be taken as value (2).
60. Child be further made conscious that the point uptill which the ball had returned because of the wall, can be attached value (2), taking into be that it is because of the absence of the wall
61. The placement of value '2' in between values 0 and 1 and the transformation of the triple (0, 1, 2) as (0, 2, 1) is big step of understanding and comprehension.
62. It is this comprehension which deserve to be emphasized.

63. In general it would be of the format $(n+0, n + 1, n + 2)$ transiting into $(n+0, n + 2, n + 1)$
64. This Phenomenon leads to a very rich format of features, sequentially young minds deserve to be exposed to the spectrum of values of this format.

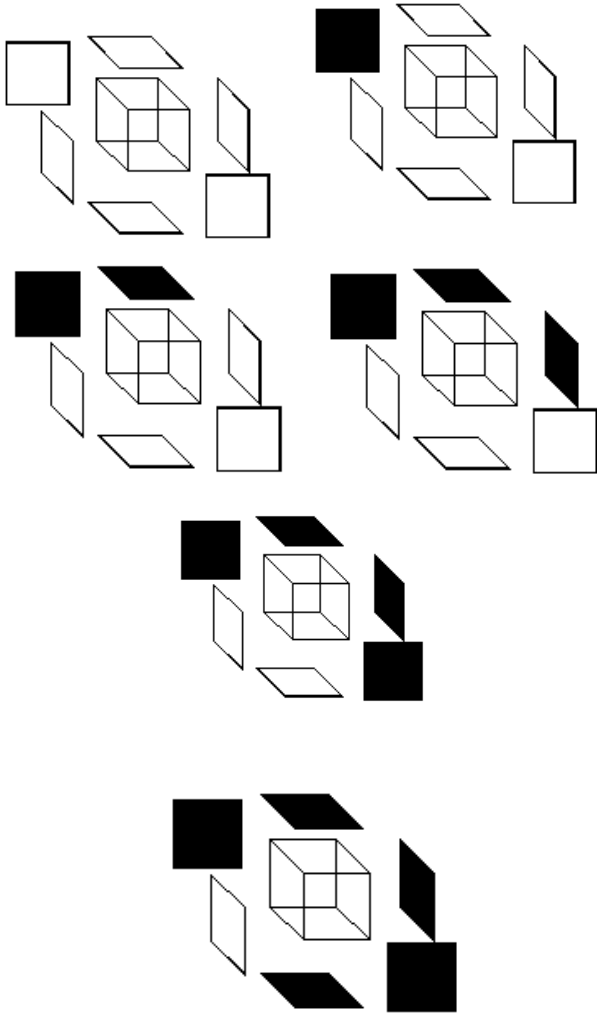
Step 3

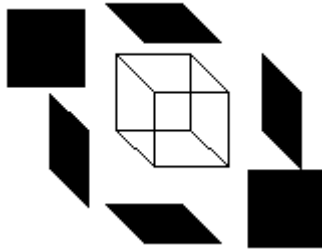
Completeness and incompleteness

15. Completeness and incompleteness is the concept which deserve to be very gently exposed to young minds with the help of a line by striking out one of its point making a split for the line.
16. It should be emphasized as that even the single point of the line by its absence (removal) makes the completeness of the line and incomplete one.
17. It is this difference of single point which makes the completeness, and incomplete.
18. The void created by single point absence matters for the completeness / fullness of the line.
19. Like that the concept of completeness and incompleteness can be demonstrated by removal of a thread (line) from cloth (sheet) / surface.
20. The split of solid / cube with / in terms of the 'inbetween surface' would be another demonstration of completeness (vis-à-vis) incompleteness.
21. Close interval (interval with its both ends point intact as a complete set up will lead to incomplete set up by removal of even one of the

end points of the interval which shall be making close interval into half close interval.

65. The concept of 'completeness and incompleteness', in reference to interval as above, that way shall be leading to three versions of interval namely (i) close interval with its both end point intact, (ii) half closed interval with its only one end point intact, and (iii) open interval with its both end points missing.
66. The open interval, will permit its split into a pair of intervals, with one of them being the open interval and other being half closed / half open interval.
67. The concept can be demonstrated further in respect of surfaces /squares by demonstrated that there would be five versions of square namely (i) square with all the four boundary lines intact (ii) square with only three boundary lines intact (iii) square with only two boundary lines intact (iv) square with only one boundary line intact and (v) square with its all the boundary lines missing.
68. The presence of end points of an interval and of boundary lines of square, as such be taken as the signatures (presence of boundary components and in terms thereof the concept of version of square / geometry of 2-space may be introduced.
69. A step ahead the concept may be further demonstrated in reference to the set up of the cube being of 7 versions of 7 three space geometries of 6, 5, 4, 3, 2, 1, 0 versions / presence of the surface plates of the cube.





Lesson -10

Intelligence growth

Third phase

Step 1

Unit, length and infinity of points

Recapitulation

33. First phase of intelligence growth avails (i) as arithmetic value (ii) phase second of intelligence growth avails values '0' as algebraic entity.
34. The present third phase of intelligence growth avails format of unit length as infinity of points.

Third phase

35. Young minds shall be very gently expose to value '1' as unit length and value '0' as single point.
36. Further unit length shall be chased as a set of infinity number of points.
37. It would be a static state for light as a set up of points.
38. Further line be taken as format of a moving point.
39. The coverage of line as a moving point is a feature which transits from static state of line as an infinity number of points to line as a track of moving point
40. It in a way transition from static state to a dynamic state.
41. One may have a pause here and make the young mind conscious of point as a zero space body in a dynamic state tracking as a 1-space body.
42. One may further have a pause here and the young mind be further made conscious of point as zero space body being the boundary component of line as 1-space body as domain accepting 0-space body at its boundary.

43. From this stage, young mind be very gently and in a sequential steps be exposed to 1-space body (line) being at the boundary of 2-space body / square.
44. Here, the young mind be further made conscious as that square / surface in its static state is a set of an infinite number of lines.
45. Further as that square / surface is a track of a moving line.
46. A step ahead young mind be exposed to surfaces being at the boundary of solids / cube / 3-space bodies.
47. Here as well young minds be very gently made conscious and expose to the static state and dynamic state of cube / solids / 3-space bodies.
48. A step further the static and dynamic state of 4-space bodies / hyper cube 4 being exposed with the help of cubes / solids / 3-space bodies.

Step 2

To knockout a point from unit length

29. Young minds shall be very gently exposed to the knocking out of a point from the unit length.
30. This may be demonstrated with the help of number of balls set adjacent to each other as a row.
31. Any ball of in between placement be very gently lifted out without disturbing the placements of the other balls of the row.
32. With the removal of one ball, the row would split as a pair of rows with the gap in between.

33. This split of a row into a pair of rows because of removal of one ball deserve to be comprehended well
34. Slowly the length of the original row be made large, and very large to symbolize it as an infinite row.
35. With its help, it be focused for the conscious attention of young mind that one infinite row split itself as a pair of infinite rows.
36. At this point of focus, the consciousness of young mind be further constructed upon the features as that line duplicate itself as a pair of lines, infinite line as a pair of infinite lines.
37. One may have a pause here and make the young mind further conscious as that how with removal of '1', infinity is leading to pair of infinites.
38. Here further very gently the young minds be further made conscious as that point as zero space body when knocked out of unit length, it makes unit length deficient of just a zero value point and still is capable of transforming infinity as a pair of infinites.
39. Here, further very gently, attempt be made that young minds start comprehending point / 0-space body / value '0' and line / 1-space body / value '1' acquiring identical formats and roles.
40. It is a very gentle exercise. It is a very delicate comprehension.
41. It is sublime step.
42. It is a virtuous growth of intelligence to handle 1 and 0 on identical formats and that too has a process of making infinity deficient of its single component.

Step 3

Part as a whole

To knockout a point from unit length

17. Young minds deserve to be exposed very gently about the concepts of Equality and of being Big and Small.
18. This may be demonstrated with the help of our popular symbol of equality (=).
19. Here focused attention of young minds be made consciousness centric as that the symbol of equality avails a pair of parallel lines of equal length.
20. One may have a pause here and make young minds further conscious of equality in terms of lengths of lines.
21. Further here, it be demonstrated with the help of sticks as of lines formats of different lengths as that there exists big and small sticks (lines).
22. One may have a pause here and have a fresh look at the set ups of lines.
23. Every line is a set up of infinite number of points.
24. Line, may be big or small, is a set up of infinite number of points.
27. One may shall further have a pause here and young mind be made conscious as that line may be big or small in terms of its length (s) but the same being always a set of an infinite number of points, so infinity (number of points) being a unit shall be making each line big or small being equal as per the unit of infinite points.
28. This is a very delicate appreciation.
29. Its comprehension as well, as such, becomes equally delicate aspect.
30. Infact, here a pair of units are at work.
31. First unit at work is of length as a unit.

32. The second unit at work is of infinity number of points.
33. One may further have a pause here and to bring to the focused attention of young minds that when this concept is work further in the context of surfaces, it shall be bringing to focus parallel features.
34. Here in the context of surfaces, 'area unit' may be taken in place of the length unit in reference to lines.
35. One may have a pause here and bring to the pointed attention of young minds as that a line, how so ever big it may be is devoid of an area.
36. This being so line is accepting zero area value.
37. This zero area value of line, that way brings in second unit in reference to surfaces.
38. Infinite number of lines as a unit and unit area, that way gives us a pair of units for appreciation of set up of surfaces.
39. The unit area (howsoever small area may be) is going to be a set up of infinite number of lines (as infinite number of zero areas).
40. As such the surfaces may be big or small but each surface becomes a set up of infinite number of lines and as such become equal in reference to unit of infinite lines.
41. One may further have a pause here and to impress upon the young minds to extend the above pair of units approach to lines and surfaces to the solids as solids and surfaces.
42. One shall further have a pause here and to consciously make them of focused attention for working with a pair of units of two consecutive dimensional bodies like (points, lines), (lines, surfaces), (surfaces, solids), (solids, hyper solids).
43. The concept of part being equal to whole, deserve to be comprehended well for its thorough appreciation and full imbibing for proper insight.

44. It is this insight imbibing, appreciation and comprehension of the concept of big and small parts still being equal in the context of the constituents of the previous dimensional bodies will provide a breakthrough for the intelligence growth and same deserve to be attained consciously.

Step 4

Part as a whole

Fractions of unit and numerals of place value system

19. Young minds shall be very gently exposed to fractions of a unit.
20. Unit shall be accepting double format.
21. As in case of a line, first format would be of length and second format would be of points.
22. To approach fraction of a unit, as such accordingly would be to avail a pair of formats.
23. Taking '10' as a unit and 1 to 9 as numerals of ten place value system, the concept of both of the formats standing satisfied in respect of it, is a very delicate aspect and concept.
24. Heavy responsibility lies upon the parents and teachers to expose young minds to the above aspects of above concept with very gentle steps.

25. One way would be to approach parts of the units as fractions.
26. In the context the second format of the unit in terms of constituent of the unit would takes us parallel to numerals of place value system.
27. Here would follow the concept of expression for the fractions in the format of equivalent decimal expressions.
20. Further, parallel to ten place value system, there would be number of situations of other place value system as well.
21. No doubt, it would be a very delicate approach require to work with all types of place value systems.
22. However once one comprehends well working with ten place value system, transition may be had for other place value system as well.
23. But this should be attempted one by one, say first of all one may shift from ten place value system to nine place value system then to eight place value system and so on.
24. Ganita Sutra 12 may help perfect the intelligence at this phase and stage of growth of intelligence.



Lesson 11

Intelligence Growth

Fourth phase

9. We reach fourth phase of the intelligence growth steps.
10. This phase of intelligence growth as well is of four steps, namely:
 - ix. Reach from the present stage to previous state as well as to the future state
 - x. Unfolding of the existing state for its reach to previous state as a sequential reach.
 - xi. To have sequential increase of intelligence growth
 - xii. To intensify the intelligence growth.
11. These four steps of intelligence growth of the present fourth phase is parallel to Ganita Sutras 13 to 16 respectively.
12. The formats and working values of Ganita Sutras 13 to 16 may be availed for intelligence growth steps of the present phase.

First step

Reach from the present stage to previous state as well as to the future state

3. This step of intelligence growth as first focus upon the existing intelligence state.
19. It is only with proper evaluation of the existing state of intelligence that further steps can be planned.
20. To have evaluation of the existing state of intelligence, in itself is a very delicate exercise.
21. This being so, the parents and teachers undertaking the exercise to help young minds to have proper intelligence growth shall come up to the expectations of capacities to have evaluation of existing state of intelligence.
22. For it, one way would be to see the degree of success with which the child reaches back to the previous stage of learning.
23. It is the degree of ease with which the child can reach the previous stage of learning, the same shall be going to be the intelligence index of the child.
24. This way going sequentially back will provide a parameter for the intelligence index.
25. This parameter can be sequentially applied for going back and coming forward from the previous states to the existing state of intelligence.
26. It is this two fold approach of going back as well as coming forward, which can be availed for the ensured sequential progression for the intelligence growth.
27. The parents and teachers may expose the young minds to the format and values of Ganita Sutra 13.

Second step

Unfolding of the existing state for its reach to previous state as a sequential reach.

39. The reach from existence state, on its either side, that is towards previous state as well as towards future state, may appear to be of parallel formats and values but infact, it is not so.
40. This being so, heavy responsibility lies upon the parents and teachers accepting the responsibility to expose young mind in such a way that there is appropriate intelligence growth without any stretch upon the innocence of mind.
41. One way to initiate such exposure would be with the help of the format and values of a line / interval.
42. Going from one end of the interval to other end of the interval and the reverse reach from the second end of the interval to the first end of interval are of opposite orientations.
43. Taking first orientation as +1 and second orientation as (-1), we can explore the formats and values further.
44. +1 orientation is like a line which permits sequential progression as per the working rule 'one more than before' of Ganita Sutra 1.
45. The second orientation as such is also of line format but accepting sequential progression as per the rule (one less than before) formulation of Ganita Sutra 14.
46. For further comprehension and insight, let us revisit artifices pair (+1, -1).
47. Parallel to this artifices pair (+1, -1) is spaces pair (+1 space, -1 space).

48. For further insight let us revisit pair of spaces (+1 space, -1 space) in reference to their simultaneous roles as domain fold, dimension fold.
49. One may have a pause here and permit the transcending mind to continuously remain in prolonged sitting of deep trans and to glimpse the differences of values and virtues of +1 space as domain fold and -1 space as dimension fold of hyper cube 1, and in general in respect of hyper cube n.
50. The emerging delicate differentiating values and virtues formulation format of Ganita Sutra 1 deserves to be emphasized well.
51. For this need would be that above differentiation of format and values shall be visited and revisited time and again.
52. This way it is the proper comprehension, due appreciation, desirable imbibing only shall be enriching the insight about the steps of reaching back from existing state to the previous state.
53. Young minds shall be helped very gently with the help of formats, values and virtues of Ganita Sutra 1 and Ganita Sutra 14
54. Let young minds shall be made conscious and to be properly alerted as that +1 (space) leads to domain fold while (-1) space leads to dimension fold.
55. The young minds shall also be properly exposed the difference of +1 space and -1 space.
56. Parallel to it there should be proper exposure about the difference of +1 and -1 artifices which comes to be $(+1 - (-1)) = 2$.
57. Some hint may be given of transition from the order of linear order mathematics to spatial order Mathematics.

Third Step

**To have sequential increase
of intelligence growth**

19. Vridhi and Guna are two basic features. Young minds shall be very gently exposed to these conceptual terms / features.
20. One way to approach this pair of terms is to go parallel to features of addition and multiplication.
21. Addition leads to and avails formats and features of sequential progression as increase.
22. This, this way makes it parallel to a linear order.
23. The operation 'multiplication' leads to and covers a format of features parallel to 'powers'.
24. Vridhi and Guna as parallel to addition and multiplication may also be approached as addition at the base and addition at the index.
25. Further these can be respectively approached parallel to dimension fold progression and domain fold progression.
26. Here the concept term 'इत्' as well be introduced 'to remove'.
23. The term 'इत्' shall be very gently exposed with the help of 2-space / plane / surface within two dimensional frame.
24. It would be amounting to that 2-space set up is reduced into two dimensional frames.
25. The composite term 'xqf.kr' be approached as the set up being reduced to its constituents draft off properties.
26. It in a way would amount to reaching at the affine state of the constituents.

27. It is the collectivity of affine state constituent which be handled with perfection (of intelligence).
28. This phase and stage of intelligence growth handling affine state constituents with perfection makes the intelligence growth as well of perfection reach.
29. It is this perfection reach, with which affine state constituent can be handled is the attainment for the young minds being fulfilled with perfection state of intelligence growth.
27. Parents and Teachers can avail the format and features of Ganita Sutras 15 for such attainments for the young minds.

Fourth step

To intensify the intelligence growth

49. Here we reach last step of fourth phase of steps of intelligence growth along the formats of Ganita Sutras 1 to 16.
50. It may be recapitulated that the format and values of Ganita Sutras 1 to 15 have been availed uptill this phase and stage of steps for intelligence growth.
51. It may further be recapitulated that in the previous steps the format and values of Ganita Sutra 15 have been availed.
52. Ganita Sutra 15 text avails the basic formulation 'गुण'.
53. Ganita Sutra 16 text avails this formulation.

54. Ganita Sutra 15 text avails the formulation 'गुणित' while Ganita Sutra 16 avails the formulation 'गुणक'.
55. The format and values of Ganita Sutra 15 are the chase of virtue of affine status of the constituent of wholeness by reaching at wholeness being dreft of features (गुणा).
56. The present text of Ganita Sutra 16 avails the formulation 'गुणक' which as such leads to formatting of features 'गुणा' within and as the set up of the first varga consonant 'क'.
57. The format values and features of letter 'क' are of the order of 'क ब्रह्मा' Ka Brahma and 'क शिव्' Ka Shiv

'क ब्रह्मा' Ka Brahma and 'क शिव्' Ka Shiv

58. 'क ब्रह्मा' Ka Brahma is of the format, values and virtues of Lord Brahma, the presiding deity of real 4-space which is of a spatial order.
59. 'क शिव्' Ka Shiv is of the format, values and virtues of Lord Shiv, the presiding deity of real 5-space which is of a solid order.
60. As such one may have a pause here and young minds be very gently exposed to this compactified states of manifested creations permitting transcendence therefrom from creator's space (4-space) to transcendental (5-space) space.
61. With it one shall further have a pause here and very gently expose them to this format of creations having transcendental base and making it of values and virtues of transcendence permissibility from spatial order creation format of 4-space to solid order transcendence range of the transcendental domains base of creation.

62. One may further have a pause here and permit the transcending mind to continuously remain in prolonged sitting of deep trans and to see that this reach from 4-space to 5-space, as such shall be leading us ahead to 6-space.
63. It is the achievement.
64. It is the attainment of the perfection of intelligence parallel to the format of organization of Ganita Sutras 1 to 16.
65. The above sequential order of reach from 4-space to 5-space and ahead from 5-space to 6-space shall be leading us back to the working rule of Ganita Sutra 1 'one more than before'.
66. With it the whole system becomes cyclic.
67. The original initiation as artifices of numbers now takes us to the dimensional frames / dimensionalised spaces.
68. It is in this way that the intelligence field starts intensifying itself.
69. This being so the sequential chase again from Ganita Sutra 1 to Ganita Sutra 16 shall now giving us a reach for the dimensional based.
70. Here at this second round, Ganita Sutras shall be approached simultaneously along with Upsutras.
71. Here it would be relevant to note that Ganita Upsutra 1 is of the format and values of symmetry / proportionality / of form as it is and it shall be adding to our intensity of understanding and insight of first round reach in terms of artifices of numbers (Sankhiya Nishtha) and second round of reach in terms of dimensional spaces (Yoga Nishtha).
72. With it parents and teachers shall discharge their solemn responsibility for helping their children and students to have proper growth of their intelligence and intelligence field to be fulfilled with transcendental values of consciousness states.



Lesson -12

Fifth Phase

Intelligence Field

Dwitya Variti

द्वितीय वृत्ति

31. During प्रथम वृत्ति Parthma Vriti intelligence growth steps have been chased parallel to the formats and values of Ganita Sutras 1 to 16.
32. This chase had brought us phase to phase with the way Ganita Sutras 1 to 16 at phase and stage of Ganita Sutra 16 takes us back to Ganita Sutra 1 as a sequential continuity like that of circumference of a circle and the organization of Ganita Sutras as such becomes of cyclic features.
33. Accordingly the attainment of intelligence growth of above steps attains perfection of cyclic features of sequentially intensifying itself as intelligence field of the set up of sequential cyclic phases.
34. It is like the surface permitting chase as concentric circles.
35. The second round of chase of intelligence growth, as such becomes the chase of intelligence field. During the first round of chase of intelligence growth

the help was taken of the formats of artifices of numbers being the mathematical entities.

36. During present second round of chase of intelligence growth as intelligence field is to avail the dimensional frames has mathematical entities.
37. Here it would be relevant to note that to establish processing processes of Vedic Systems are (1) Sankhiya Nishtha and (2) Yoga Nishtha.
38. Sankhiya Nishtha avails artifices of numbers presuming the existence of dimensional frames.
39. Yoga Nishtha avails dimensional frames presuming the existence of artifices of numbers.
40. With it, the second round of chase of intelligence growth as intelligence field, that way goes to the base of artifices of numbers.
41. This geometric base is to be approached as sequential organization of dimensional frames.
42. Ganita Sutra 1, as such in terms of its working rule 'one more than before', that way takes us from 1-space to 2-space and further from the role of 1-space as dimension to 2-space with the role of dimension.
43. Here it also would be relevant to note that to intensify the intelligence growth, Sutras are going to be of great help.
44. As such, the sadkhas shall simultaneously chase Ganita Sutra 1 and ganita Upsutra-1, the working rule one more than before of Ganita Sutra 1 together with the working rule of symmetry / proportionality / following the form as it is, together shall be providing the desired breakthrough and

initiation for intensifying the intelligence growth and the smooth evolution of the intelligence field.

45. One shall sit comfortably and permit the transcending mind to continuously remain in prolonged sitting of deep trans to simultaneously workout Ganita Sutra 1 and Ganita Upsutra 1 and acquire proper insight of initiation of evolution of intelligence growth.



5.