

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

List 4

Manuscript – 14 **Vedic Mathematics Teachers Course**

Vedic Mathematics Teachers Course

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Vedic Mathematics Teachers Course

About this course

1. Ultimate Aim
Vedic mathematics, Science & Technology
2. Starting point
Vedic Mathematics
3. Existing state
Beginning is to be from the very beginning
4. Theme of initiation
Simultaneous to learn and teach
5. Beginning
Beginning is to be with the Teachers
6. Initiation
Initiation is to be with the Vedic Mathematics teachers course.
7. Schooling phasing
Schooling phasing is to be four phased parallel to class 9, 10, 11 & 12
8. Exposure sequence

Exposure sequence as well is to be four phased as 3-space exposure to be for class 9 and 4, 5, 6 space exposure is to be for class 10, 11 & 12 respectively

9. Exposure format for values

Exposure format is to be geometric for numbers values chase; as such class IX to learn linear dimensional order, while class 10, 11 & 12 shall be respectively learning spatial, solid and hyper orders in that sequence.

10. Conceptual source text

Ganita Sutras to be accepted as the conceptual source texts for the startwith Vedic Mathematics Teachers course.

11. Startwith course theme

Startwith course theme is to give overview exposure of the whole programme.

12. Why this course?

1. This course is an initiative to set the ball rolling for bridging the gap between '**Ancient Wisdom**' and the '**current knowledge**'.
2. It may be put as that there appears to be a wide gap between the '**values and procedures to reach at the values**' in '**Ancient Times**' and during '**modern times**'.
3. Modern analysis (real, complex, topological and abstract) reach is of different attainments than that of Vedic Mathematics and as such there is genuine

necessity to bridge the gap between the two streams of attainments. Last 50 years since the publication of Vedic Mathematics Book edited from the notes of Swami Bharti Krshna Tirtha Ji Maharaj and published in 1965, and the last century since Swami Ji's attention was drawn to Ganita Sutras, one hope has arisen but the way Ganita Sutras values are permitted to dry up and to go dormant again, creates anxiety.

4. And to meet it as well and to continue attempt for bridging the wide gap between the thinking processes of Ancient Mind and Modern Mind, the present attempt in the form of present course for Vedic Mathematics Teachers may contribute desirably. So the present initiative.

13. What precisely is the aim of this course?

1. The immediate aim of this course is to give exposure during first week about the overview of the course as to its ultimate objective desired to be achieved by this initiative of Vedic Mathematics Teachers Course. Vedic Mathematics is pure value of Vedic Mathematics, Science and Technology. On this value format manifests applied values of Vedic Mathematics, Science and Technology, as such, for the reach at full range of pure and applied values of Vedic Mathematics, Science and Technology, present initiative, in a way is going to be one big step forward for the attainments.

14. How the immediate and ultimate objects are visualized to be attained?

1. Being conscious of the present state of exposure to the procedures for reaching at values of Vedic mathematics, Science & Technology in terms of the Ganita Sutras, central theme and technique of the present course is to '**simultaneously Learn and Teach**'.
2. Taking that, beginning is to be like that, at initial stage school level range of instructions for high and higher secondary classes are outlined as to be a four phased programme of Vedic Mathematics Teachers Course. After that, the higher level learning and teaching programme for Vedic mathematics, Science & Technology explorers is going to be attended to.
3. The four phased programme of Vedic Mathematics Teachers Course is to be of progressive sequential evolution features. This is going to be parallel to progressive sequential evolution features of quadruple artifices (1, 2, 3, 4) are of quadruple orders (linear order, spatial order, solid order, hyper solid order or of our well known quadruple bodies (point, line, square, cube) and so on).
4. This level of exposure in terms of (say point, line, square, cube) shall be helping to attain smooth transition therefrom to progressive sequential evolution format of coordination feature of (cube, hyper cube 4, hyper cube 5, hyper cube 6).

5. Ahead, of its own, natural progression can be visualized as of (hyper cube 6, hyper cube 7, hyper cube 8, hyper cube 9) and so on.

15. What is the outline of first phased schooling programme?

1. Under this scheme of visualization, the first phase schooling programme of Vedic Mathematics Teachers Course is to have focus upon and same is to be centered around needs of class IX level.
2. It as such is to concentrate upon 'linear order', which itself is to be worked out as a 'track of a moving point', while the linear order shall be approaching and structuring 'physical matter / content' within three linear axes frame, a system which as such may be designated, accepted as '3-space linear mathematics systems'.
3. As the main objective of the course is to attempt smooth transition from Ancient Wisdom approach and to augment and integrate it with the current stream of knowledge but as at present even the settlement of text book to be followed as book of instruction in the class room, so the whole exercise is to be slow and of self improving features.
4. Therefore during this course itself for Vedic Mathematics, a dew attention as well is be had upon the possible topics which at initial stage may be accepted for this phase of schooling.

5. To set the ball rolling, the suggestive outline is in the Annexure – 1.

16. About this course

1. Present course aims to initiate the process for institutionalization of Vedic Mathematics Teaching. Taking into consideration the present state of approach and attainments centered around individualistic efforts, it is felt that able the stress during the Vedic mathematics teachers training course as well. The focus is to be upon simultaneously learning and teaching Vedic Mathematics. With this in mind, the present Vedic Mathematics Teachers course is being phased four fold parallel to the needs of four fold phasing of higher secondary school level mathematics.

First Phase

2. The first phase of Vedic Mathematics Teachers course is aimed at learning and teaching expectations for and from Vedic Mathematics Teachers of class – 9.

Sub Phases of phase one

3. As such, the features of this phase of the course are taken to be of four sub phases devoting to (i) Approach of Vedic Mathematics to Macro state – Linear order – Physical world (ii) Text book settlement for Vedic mathematics for class IX (iii) Learning, Teaching of

Vedic Mathematics of class 8 (iv) Evaluation of learning of values of class IX level Vedic Mathematics.

Sub phase wise stages

First Sub phase: Approach of Vedic Mathematics to Macro state – Linear order – Physical world

Second sub phase: Text book settlement for Vedic mathematics for class IX

Third sub phase: Learning, ‘Teaching of Vedic Mathematics of class IX’

Fourth sub phase: Evaluation of learning of values of class IX level Vedic Mathematics

First Sub phase: Approach of Vedic Mathematics to Macro state – Linear order – Physical world (Twelve weeks)

17. Scope of Vedic Mathematics values

1. Vedic Mathematics values and procedures to reach at the values make the Vedic Mathematics of distinct features because of which it deserves to be taken as Discipline whose chase instructions are to be distinctively learnt. Because of it, Vedic Mathematics deserves to be approached as distinct Discipline of knowledge.

2. Vedic systems successfully manage and cover whole range of knowledge as a single integrated wholesome Discipline. This wholesome approach to knowledge as a single Discipline, as a Discipline of instructions has made the subject a difficult one for those who are anxious to have segregated tabulation of values of particular features of knowledge of specific choice like that of Life and Death 'question's answers, potentialities and limitation of existence within and without Human Frame, distinct values of Earth and water together as a class and like that, and as a choice range of mathematics, black matter, pole star and all that.
3. Modern mind accustomed to approaching knowledge as set of distinct Disciplines as mathematics, physics, biology and all that and the Ancient Mind tuned to approaching whole range of knowledge as a single Discipline, as such have developed unbridged void which for the innocent young minds helplessness situation as for overcoming of the same and outside help is must.
4. This void continued for centuries and even continues at present. Whether the knowledge is a single integrated wholesome Discipline or that the knowledge is a set of distinct Disciplines is continuing with us and appears to remain so for time to come. New hope and light for fulfilling the void in the form of Ganita Sutras brought to awakening state from their dormant state by Swami Bharti Krshna Tirtha Ji Maharaj is blissfully inspiring.

However, our handling of the values of Ganita Sutras all these 50 years since the publication of the Vedic Mathematics Book in 1965 from the notes of Swami Ji, it reflects and gives the impression that unless and until some conscious attempt is not continued the possibility of Ganita Sutras going dormant again cannot be taken a pessimistic view.

5. In the words of Swami Bharti Krshna Tirtha Ji Maharaj

“The Ganita 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;

The Sutras are easy to understand, easy to apply and easy to remember; and the whole work can be truthfully summarized in word ‘mental’!

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;

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.)!

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!

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.

18. Initial Initiation of the Course

Opening words

1. This course being the first initiative, the same as such is of expectations of setting the ball rolling hoping that the augmentation inputs would continue following and the vision two to have its destined fixation.

Scope

2. Scope of the course is interlinked with the vision of Vedic Mathematical domain aimed to be exposed to young minds of class IX to class XII level by the participant teachers having an urge to blissfully impart the values of this Discipline to the young minds without in any way causing any scar or dent in the innocence depth of the naturally growing intelligence field of young minds.

Duration

3. To begin with one year duration is being accepted for entire range of the course for full mathematical domain coverage during four years schooling from class IX to class XII.
4. This four phased schooling, parallel to it shall be making duration for each phase as to be of one quarter only. That way Vedic Mathematics Teachers Course Training for each of these four classes is going to be of three month duration each. As such the teacher who shall be desiring to cover only one phase of the course (say of class IX level or class X, XI or XII level) the course duration would be only three months.

Phase wise schedule

5. Phase wise schedule as well is further phased as of four sub phases each of only three weeks duration for each sub phase.
6. Broadly these four sub phases (of each phase) shall be of coverage values
 - i. Approach to mathematical domain
 - ii. Text book settlement for the mathematical domain
 - iii. Art of teaching of the mathematical domain
 - iv. Evaluation of learning of the mathematical domain

7. With it, as far as the approach of the mathematical domain of particular phase of the mathematical values is concerned, the course in respect thereof is to be of only three weeks.
8. During these three weeks, in addition to the exposure to the values of the mathematical domain of particular phase (class 8, 9 or 10 or 11 or 12 as the case may be), the exposure as well is to be to the other sub phases of the face in progress namely as to the writing of text books, teaching and evaluation of this subject. Further exposure as well would follow in respect of the other phases (say while covering the phase class IX, the overview exposure for the subsequent phase of classes X, XI and XII mathematical domains) as well to be the part.

Class 9 / first phase of the course (Total duration three months)

9. Class 9 Vedic Mathematics Teachers Course is of four sub phases:

First Sub phase: Approach of Vedic Mathematics to Macro state – Linear order – Physical world

(Duration three weeks)

Second sub phase: Text book settlement for Vedic mathematics for class IX **(Duration three weeks)**

Third sub phase: Learning, ‘Teaching of Vedic Mathematics of class IX’ (**Duration three weeks**)

Fourth sub phase: Evaluation of learning of values of class IX level Vedic Mathematics

(Duration three weeks)

10. Phase – 1 sub phase 1 class IX Approach of Vedic Mathematics to Macro state – Linear order – Physical world of three weeks duration is to cover, progress and focus, week wise as three stages as under :

- i. First Week: Mathematical values
(Classical Disciplines: Arithmetic, algebra and geometry)
- ii. Second week: Overview of (Textbook, Teaching and Learning evaluation)
- iii. Third week: Overview of second, third and fourth phases of course
(coverage of class X, XI and XII level)

Phase 1 sub phase 1 week 1

day 1 Basic Arithmetic operations,

day 2 Number Systems,

day 3 Modern mind and Ancient Mind,

day 4 Intelligence field

Phase 1 sub phase 1 week 2

- day 1** Text features of Ganita Sutra 5 and 6
- day 2** Ganita Sutra 6 & 5 and Ganita Sutra 4, 3, 2, 1
- day 3** Ganita Sutras 5 & 6 and 7, 8, 9 and 10
- day 4** Conceptual format, features, values, virtues and order of '0'.

Phase 1 sub phase 1 week 3

day 1 Numbers line

day 2 Numbers cone and conics

day 3 Points, Lines, Surfaces and solids within cube and sphere **day**

4 $(A+2)^n, n = 1, 2, 3$

19. Overview Week of the Course

Opening Words

1. This week, it is aimed to give overview of the Vedic Mathematics Teachers Course.
2. Essentially it is going to be an overview of the exposure which is to be given to the participants about the mathematical domain which as a Discipline is to be the teaching subject of responsibility of the participants.
3. As the aim is to give exposure to the mathematical values being approached in specific way of Vedic Mathematics, as such the focus is to remain upon the

concepts and especially about the procedures which are to be followed to reach at the mathematical values of pure and applied features.

4. This being so, it is not only the tabulation of concept but also their sequential arrangement and the order of arrangement thereof, as well would deserves to be comprehended well to have an insight about the conceptual format of approach and its attainment in this whole exercise.
5. Source text during this chase is going to be the Text of Ganita Sutras.
6. It is in terms of its organization that progressive sequential evolution of the course steps are to be adopted.
7. 'Ganita Sutras' being the Vedic Scripture complete in itself, as such the inherent features of Vedic systems would be automatically available here.
8. This being so the initiation in terms of the Transcendental source reservoir in the form of 'Om Itah Ek Akshar Braham' as the beginning point and 'Tasya Vachka Parnava' as the end fruit value attainment shall be making the whole processing system range being of cyclic renewing format.
9. It is this feature of Vedic Ganita of Ganita Sutras format which deserves to be comprehended well and to be appreciated fully for its complete imbibing to have proper insight of this Discipline of knowledge as ultimately it is to become the foundation of the 'Vedic mathematics, Science & Technology'.

Mental Mathematics

10. Values and procedure to reach at the values by Ganita Sutras distinguish themselves as being parallel to progressive sequential evolutionary format of intelligence field at the core of consciousness states of mind domain of human brain as such it becomes 'mental mathematics'. It is this feature of Ganita Sutras which makes them acceptable.
11. As this phenomenon is feature of existence within human frame, as such it would be natural to expect that not only the potentialities features of human frame but also the very format of manifestation of human frame itself is to be the foundation of organization format of Ganita Sutras themselves.
12. This that way takes us to the Sathapathya measuring rod synthesized by hyper cubes 1 to 6 as to be the source reservoir of working rules.

Sathapatya measuring rod

13. Sathapathya measuring rod is meant for exhaustive chase of our solar universe of Earth to Sun range.
14. It as such is of 6-space format and hyper cube 6 being its representative manifested body, as such hyper cube 6 / 6-space / artifice 6 comes at center of the whole organization

15. That chase of this domain in terms of self referral range (1, 2, 3, 4, 5, 6) / (1-space, 2-space, 3-space, 4-space, 5-space, 6-space) / (hyper cube 1, hyper cube 2, Hyper cube 3, hyper cube 5, hyper cube 6), that way becomes the subject of learning and teaching.
16. 6-space accepts 4-space in the role of its dimension, while 6-space itself plays the role of origin for a solid dimensional order (3-space in the role of dimension of 5-space). Vedic system approach this range of feature of the existence phenomenon as 'Triloki and Trimurti'.

Triloki and Trimurti

17. One feature of Triloki and Trimurti is 'that it permits its chase in terms of quadruple artifices (3, 4, 5, 6) / quadruple spaces (3-space, 4-space, 5-space, 6-space) / (quadruple hyper cubes (hyper cube 3, hyper cube 4, hyper cube 5, hyper cube 6) / four fold manifestation layer (3-space content as dimension fold, 4-space content as boundary fold, 5-space content as domain fold, 6-space content as origin fold) / four fold Transcendental domain (5-space as domain).
18. As such this course of Vedic mathematics teachers, is being visualized as four phased chase, sequentially focusing upon 3-space mathematics, 4-space mathematics, 5-space mathematics and 6-space mathematics, to be covered sequentially as Vedic Mathematics, class 9, 10, 11 and 12 respectively.

20. Overview week of Class IX Vedic Mathematics

Object of the course

1. Object of the course is to give initial conceptual level exposure to the participants aiming to Learn and Teach Vedic Mathematics to Class IX level students.
2. Being of initial conceptual level exposure, as such here the focus is to remain upon the '*CONCEPTUAL VALUES*' and the procedural details may be indicated in terms of selective illustrations but rest of this aspect of procedures to reach at the values are being aimed to be reserved for the next level course.

Duration and chase steps

Duration

3. The broad outline for coverage of the topics for class IX level Vedic Mathematics being of ten steps (chapters) and taking that the first exposure of one day for each step, as such shall be requiring ten working days for this aspect. Added to it, two more days, as inaugural and concluding days, that way shall be making it a twelve days programme.
4. However, for proper comprehension and insight, it would be desirable that such programme shall be followed by another twelve weeks programme.

Chase step

5. Programme chase steps to run parallel to the outline of the course subject for class ix level.
6. The central focus is to remain upon CONCEPTUAL EXPOSURE.
7. The first step / chapter 1 '**Introduction**' is outlined as being of ten steps, ass such the conceptual chase is to be parallel to be of the following features:
 - 1.1 Teacher-disciple joint prayer
(Kathoupanishad prayer)
 - 1.2 Mathematical approach (Yoga Churamaniupanisahd-71)
 - 1.3 Mathematics of one
 - 1.4 Shad Chakra format
 - 1.5 Vedic mathematics
 - 1.6 Macro, micro, casual and Supreme orders
 - 1.7 Macro (physical) basis
 - 1.8 Macro (Atomic) basis
 - 1.9 Nuclear world basis
 - 1.10 Supreme order basis
8. The conceptual chase as outlined above is to assimilate the values and virtues of 'Teacher-Student' joint prayer. This, conceptually is going to be of central focus. It goes a step ahead of simultaneous learning and teaching value. Conceptually, the virtue of joint prayer of Teacher and Student lies in the teacher student bond. The value of this bond is manifold

comprehension of these values shall be intensifying the virtues of insight of knowledge transiting into wisdom and ahead the wisdom of its own going the Transcendental. It is with this prayer that the class is to begin:

“ॐ सह नाववतु ।
सह नौ भुनक्तु ।
सह वीर्यं करवाव है ।
तेजस्वि नावधीतमस्तु ।
मा विद्विषावहै ।
ॐ शान्तिः! शान्तिः!! शान्तिः!!!”

9. Daily recitation and doing of the prayer shall be fulfilling and providing appropriate direction for the intelligence to go the consciousness way as per the ultimate Brahman command
10. After the prayer, the yogic procedure steps for pure values is.

“पदमासनं समारूढा समकायशिरोधरः ।
नासाग्रदृष्टिरेकान्ते जपेदोकारमव्ययम् ॥ ७१ ।
-योगचूडामणि उपनिषद्”

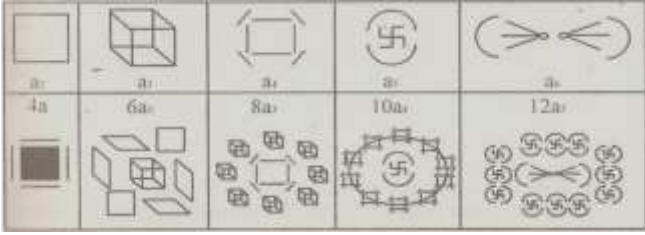
11. The procedure and command for recitation of ‘ओमकार’, which is the fourth fold following ‘Om, Parnava, Aum’/ ‘ॐ, प्रणवः, ओम’, in a sequence makes a self referral range of six phases and stages as ‘Om, Parnava, Aum, Aumkar, Udgith, Chandas’/ ‘ॐ, प्रणवः, ओम, ओमकार, उद्गीत्, छंदस’
12. The yogic procedure once initiated and set into, the same shall be of its own shall be sequentially attaining

enfoldment of the above whole of the self referral range 'Om, Parnava, Aum, Aumkar, Udgith, Chandas' / (ॐ, प्रणवः, ओम, ओमकार, उद्गीत्, छंदस)

13. The next conceptual phase and stage needed proper chase for its comprehension, attainment and insight is the Ancient Wisdom enlightenment preserved as 'ॐ इति एक अक्षर ब्रह्म' / 'Aum Itah Ek Akshar Braham'.
14. It shall be conceptually taking us to comprehension, wisdom, insight and enlightenment about 'ek' / one / 'एक'.
15. So initiated the six steps long enfoldment process shall be attaining coordination in terms of Sushmana Nadi of whole range of Shad Chakra format of human body of Sathapatya format
16. The Upanishadic enlightenment regarding the physiology of the man that the same is regulated by the Shadchakra whose external characteristics are quantifiable as 2, 4, 6, 8, 10 & 12.
17. The external structural characteristics of second to sixth Chakras are being described by the Aduvetarko Upanishad -(6) as under :

अथ बहिर्लक्ष्यलक्षणम् । नासिकायुगे चतुर्भिः षड्भिरष्टभिः दशभिः द्वादशभिः क्रमात् ।
 Here are being taken up the external (बहिर्लक्ष्य) structural characteristics (लक्षणम्) (of Shadchakra). These with respect to the Chakras (second to sixth) which are ahead of the tip of the nose are four, six, eight, ten and twelve respectively.

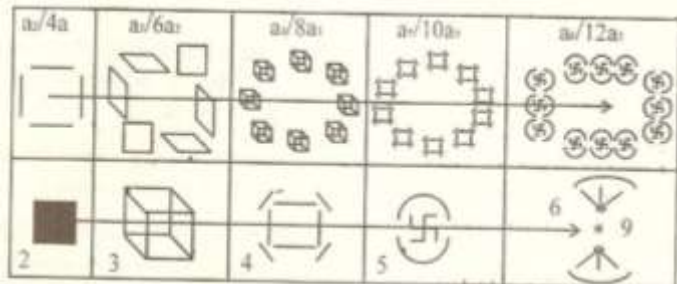
18. The above enlightenment focuses on two points, firstly that the first Chakra regarding its external characteristics forms a distinct class and secondly that the next five Chakras are having the external structural characteristic in a sequence as 4, 6, 8, 10 & 12.



19. The external structural characteristics of second to sixth Chakras are ;is are the frame parts of second to sixth members of the framed domains sequence represented by the number of components of the denominators of the respective formulations.

20. Upanishadic enlightenment of human body is that there are six Chakras in the body through which passes Brahm-Nari, known as Suryarupne Sushmana (Aduvetarko Upanishad-5)

देहमध्ये ब्रह्मनाडी सुषम्ना सूर्यरूपिणी पूर्णचन्दाभा वर्तेते ।
सा तू मूलाधारादारम्भय ब्रह्मरन्ध्रगामिनी भवति ।



21. These Upanishadic comprehensions of human physiology are unintelligible within a conventional three dimensional frame, however, the multidimensional geometry has a straight answer in terms of human body as a six dimensional domain.

Conceptual Tabulation of Phase – 1 chase course

The conceptual chase of this phase of Vedic Mathematics Teachers Course is to cover the mathematics of 3-space. Points, lines, surfaces and bodies would be the basic focal points for tabulation of conceptual chase of this phase. Cube and sphere are the representative regular bodies of common domain boundary ratio. Here the focus is upon linear order, spatial boundary, solid domain and hyper solid origin. The geometric set up of cube, particularly its geometric envelope of 26 components is to be availed for applied values. One outline of conceptual chase may be as under :

1. Teacher's Decipher Prayer
2. Yogic Procedure Initiation Step
3. Wholesome 'One' Om Itah Ek Akshar Braham Ardh
Matra Uktam Parnavo Moksh Dayika (Dhanbindu
Upnishad 17) Aum
Omkar
4. Shad Chakra format (Hyper cubes 1 to 6)
5. Ganita Sutras Text
6. Linear, spatial, solid and hyper solid order
7. Linear order
8. 3-space / 3 dimensional frame
9. 1-space as dimension, 2-space as boundary, 3-space as
domain, 4-space as origin.
10. Limit of linear order

11. Transcendence fold
12. 3-space bodies
13. 3-space content
14. Domain fold
15. Static and dynamic states
16. Limit of 3-space mathematics
17. Conceptual chase of Ganita Sutras 1 to 4
18. Reflection operation
19. Geometric set up of cube
20. Geometric envelope of cube
21. Artifice 26
22. Cube and sphere
23. Circle and sphere
24. Components of volume of sphere
25. Linear order format for
Motion / speed / velocity / acceleration
26. Motion in a line / plane / space
27. Time as fourth dimension.
28. Transition from linear to spatial format.
29. Curves and graphs as tracks of moving points / lines /
surfaces.
30. Applied values of curves and graphs
31. Common Solid domains formats of cube / sphere /
cylinder / cone / tetrahedron / egg / tree / bird / animal /
man
32. Structured point of 0-space / 1-space / 2-space / 3-
space
33. Structured points as sets with structural operations
34. Length, Area and volume as units of measures

35. Applied values of length, Area and Volume as units for distance coverage, surface swapping, space holds, temperature, pressure.

21. Conceptual Dictionary of School Mathematics

1. Before taking the assignment of writing Text Book of School Mathematics, it would be appropriate that there shall be available a conceptual Dictionary of School Mathematics being available with the Text Book Writers.
2. This conceptual dictionary of School Mathematics shall be playing the role of Guidelines frame within which the School Mathematics material is to shape itself and the text books to remain parallel to the comprehensions levels of the young minds aimed to be instructed. Let there not be a strain or a stretch for the innocence of young minds.
3. Mathematics as a Discipline of logic and reasoning and it also being the pre-requisite need for axiomatic set theoretic approach that the accepted axioms for the given entities meant for mathematize organization are to be definite and precise. This being so 'each concept' being accepted to be included in the mathematical domain, naturally is to be fully comprehended for its complete imbibing and this being so everything is to be within a settled axiomatic frame to have sequential

logical steps of reasoning to reach at the mathematical results.

4. In the context of ‘number system’ the beginning with the first count ‘1’ and reach at the ‘complex number’, that way is going to be of first challenge which is going to be of ‘conceptual domain’. Construction of further counts and the set of counting numbers and all that to be a mathematical learning through text book instructions as a classroom subject is to be kept in mind by the text book writers.
5. It is going to be a challenging assignment to enlist conceptual terms and to have conceptual features dictionary. Here is the illustration.

Sr	Conceptual features to be reached at Of -----
01	Hyper cube 1
02	Hyper cube 2
03	Hyper cube 3
04	Hyper cube 4
05	Hyper cube 5
06	Hyper cube 6
07	Hyper cube 7
08	Manifestation layers
09	Transcendental ranges
10	Self referral formats
11	Unity states
12	Dimensional synthesis
13	Earth to Sun range

14	Shad Chakras
15	Manifestation
16	Transcendence
17	Consciousness states
18	Intelligence field
19	Transcending mind
20	Creator's space (4-space)
21	Transcendental domains
22	Solar Universe
23	Pole star as origin source reservoir
24	Transcendental space
25	Matter
26	Content
27	Substance
28	Spirit
29	Compactified origins
30	Black matter
31	Light
32	Vyakata
33	Avyakata
34	Avakato-Avakatat Santana
35	Pursha
36	Zero
37	Unit
38	Addition
39	Minus
40	Multiplication
41	Division

42	Reflection
43	Refraction
44	Horizontal reflection pairing
45	Vertical reflection pairing
46	Single digit expression
47	Double digits expression
48	Triple digits expression
49	Place value system
50	----

22. Enlistment of topical aspects of Vedic Mathematics

Sr	Topical aspect of Vedic Mathematics chase
01	Devnagri alphabet
02	Ganita Sutras Text
03	Ganita Upsutras text
04	Maheshwara Sutras
05	Saraswati Mantras
06	Transcendental values code
07	Numbers values formats
08	Shiksha Upanga
09	Vyakaran Upanga
10	Nirukat / Nighantu Upanga
11	Chandas Upanga
12	Jyotish Upanga
13	Kalap Upanga
14	Yog Darshan
15	Sankhiya Darshan

16	Niyaya Darshan
17	Vaishashik Darshan
18	Mimansa Darshan
19	Braham Sutra
20	First Chakra
21	Second Chakra
22	Third Chakra
23	Fourth Chakra
24	Fifth Chakra
25	Sixth Chakra
26	First Mahabhut (Prithavi tatav)
27	Second Mahabhut (Jal Tatva)
28	Third Mahabhut (Agni Tatva)
29	Fourth Mahabhut (Vayu Tatva)
30	Fifth Mahabhut (Akash Tatva)
31	Triloki
32	Chatarmukh Brahma
33	Panchmukh Sharir
34	Shatmukh Vishnu
35	Surya
36	Dhruvtara
37	Asht Prakrati
38	Nav Braham
39	Par Braham
40	Jagrit Awastha
41	Swapan Awastha
42	Nidra Awastha
43	Turia Awastha

44	Turia Atit Awastha
45	Devbav Awastha
46	Bavatit Awastha
47	Sathul Sharir
48	Suksham Sharir
49	Karan (Ling) Sharir
50	Nad
51	Anahat Nad
52	Jyoti
53	Braham Jyoti
54	Vishnu
55	Devta
56	Chandas
57	Swara
58	Rigved
59	Yajurved
60	Samved
61	Atharavved
62	Ayurved
63	Dhaurved
64	Ghandravved
65	Sathapatyaved
66	Samhita
67	Brahman
68	Arynak
69	Upnishad
70	Mahavishnu
71	Devrishi

72	Brahamrishi
73	Brahamvakya
74	Mandal
75	Aushtak
76	Adhiyaya
77	Anuwak
78	Sukat
79	Varga
80	Richa
81	Akshra
82	Yaghya
83	Archik
84	Kanda
85	Pursha
86	Purshottam
87	Naam
88	Dhatu
89	Anubanda
90	Partya
91	Upsarga
92	Drishata
93	Trishata
94	Saptbhumi
95	Vshtkar
96	Udghith
97	Omkar
98	A, U, M, Aum
99	Tasya Vachka Parnava

23. Sankhiya Darshan

1. Sankhiya Darshan is the Discipline of mind glimpsing the existence phenomenon along geometric formats in terms of artifices values.
2. The geometric formats coordinates and synthesize a measuring rod of hyper cubes 1 to 6 for solar universe of Earth to Sun range with pole star as its origin source reservoir of unity state values flowing along the measuring rod and unifying the solar universe.
3. Unification is of self referral nature because of which the pin human body and Brahmand (solar universe) accept parallel formats which permits unison pairing.
4. With it the artifices of numbers and dimensional frame run parallel to each other for processing systems of the existence phenomenon of our solar universe.
5. With it emerges single alphabet of values of existence phenomenon and accordingly same set of formulations yield to parallel systems for processing along dimensional spaces as well as along numbers values.
6. As such Sankhiya nishtha goes parallel to yoga nishtha.
7. The both Sankhiya nishtha and yoga nishtha go parallel, as well as those become complementary and supplementary of each other
8. With it the attainments, insight and glimpsing of virtues may it be by Sankhiya Nishtha or by yoga nishtha, emerge to be of same order of enlightenment.

It is this degree of enlightenment which becomes the index of Sankhiya Darshan

9. The simple English rendering of 'Sankhiya Darshan may be the glimpsing range of artifices of numbers along geometric formats of dimensional spaces
10. With it the Sankhiya nishtha because of it availing artifices of numbers along geometric formats, the same becomes the Discipline of natural formats and values parallel to solar universe acquiring dimensional order of eight fold nature.
11. It is this feature of solar universe being playing the role of dimensional order of eight fold nature, which deserves to be chased glimpsed.
12. Solar universe as dimensional order is of the formation and features of 6-space playing the role of dimensional fold.
13. 6-space as dimensional fold structures 8-space as domain fold.
14. The artifices pair (68, 86) with summation value $68 + 86 = 154$ deserves to be followed as that $154 = 76 + 76$.
15. It as such, brings into play artifice 7 which otherwise has a unique placement in reference to artifices pair (6, 8).
16. The artifices triple (6, 7, 8) leads to self referral range of artifices (678, 687), (768, 786), (867, 876) of these the artifice 786 is of central format and features as much as that it accepts re-organization as 6 x 1 value at unit place and 6 x 13 for next placement.

17. Here it also would be relevant to note that 6-space accepts 13 geometries range and parallel to it hyper cube 6 accepts 7 versions
18. Further $7 \times 4 = 28$ as the value of second perfect number with 6 being the first perfect number, as well deserves to be comprehended and imbibed well
19. The re-organization of $28 = 1 + 2 + 4 + 7 + 14 = 1+2+4+ 1+2+4+ [(1+2+4) + (1+2 + 4)]$.
20. Further $28 = 3 + 5 + 9 + 11$ permitting chase from both ends for reach at the middle through Transcendence range (5, 6, 7, 8, 9) with a jump over (6, 7, 8) as well deserves to be chased for its full comprehension, complete appreciation and proper imbibing to have insight and glimpsing.

24. Basic Approach

1. The basic approach as format approach is primarily two fold parallel to Sankhiya Nishtha and Yoga Nishtha.
2. Sankhiya Nishtha avails artifices of numbers to be worked along geometric formats of dimensional spaces.
3. Yoga nishtha avails dimensionalized spaces chase along artifices of numbers
4. First feature of Sankhiya Nishtha availing artifices of numbers is to chase in terms of organizations of place value systems.
5. Most favoured place value system is the ten place value system.

6. As such nine numerals range together with place value '0' emerge the basic artifices.
7. This range of ten artifices (0, 1, 2, 3, 4, 5, 6, 7, 8, 9) and parallel to it the double digits range (01, 02, 03, 04, 05, 06, 07, 08, 09, 10) deserves to be chased for their features and values
8. On the other hand, parallel to Sankhiya Nishtha, the yoga nishtha as well accepts dimensional space content of 1-space to 9-space along with the origin source reservoir being the Par Brahm marking its manifested existence presence as ten space.
9. This dimensionalized space content range (0-space content, 1-space content, 2-space content, 3-space content, 4-space content, 5-space content, 6-space content, 7-space content, 8-space content and 9-space content,) and parallel to it (01-space, 02-space, 03-space, 04-space, 05-space, 06-space, 07-space, 08-space, 09-space, 10-space)
10. The transition from single digit expression formats to double digit expression formats, in the context of artifices of numbers and dimensional frames is of the feature of transition from full dimension to a pair of half dimensions set ups.
11. This, ultimately shall be amounting to of the format and features of transition from linear dimensional formats to spatial dimensional formats.
12. With 7 as the biggest prime numeral, as such artifices 1 to 7 and parallel to it 1 to 7 dimensional spaces that way bring to focus 1-space to 7-space.

13. With it, 1-space to 7-space contents manifesting as domain folds of hyper cubes 1 to 7 become the subject matter of chase.
14. This, this way makes format approach essentially being the approach of chase of formats of hyper cubes 1 to 7.
15. Symbolically hyper cubes 1 to 7 may be expressed as

HC = Hyper cube, S = Symbol, Dimension = Di, Boundary = B, Domain = Do, Origin = Or, Space content (Sc) Format = (F) Self Referral = Sr Transcendental = Trans, Unity age = ua

Sr	HC	S	Di Sc	B Sc	Do Sc	Or Sc	Base (s)	F Sc	Trans Sc	Sr Sc	Ua Sc
1	HC 1	—	(-1) Sc	(0) Sc	(1) Sc	(2) Sc	(3) Sc	(4) Sc	(5) Sc	(6) Sc	(7) Sc
2	HC 2	□	(0) Sc	(1) Sc	(2) Sc	(3) Sc	(4) Sc	(5) Sc	(6) Sc	(7) Sc	(8) Sc
3	HC 3	▣	(1) Sc	(2) Sc	(3) Sc	(4) Sc	(5) Sc	(6) Sc	(7) Sc	(8) Sc	(9) Sc
4	HC 4	▤	(2) Sc	(3) Sc	(4) Sc	(5) Sc	(6) Sc	(7) Sc	(8) Sc	(9) Sc	(10) Sc
5	HC 5	▥	(3) Sc	(4) Sc	(5) Sc	(6) Sc	(7) Sc	(8) Sc	(9) Sc	(10) Sc	(11) Sc
6	HC 6	▦	(4) Sc	(5) Sc	(6) Sc	(7) Sc	(8) Sc	(9) Sc	(10) Sc	(11) Sc	(12) Sc
7	HC 7	▧	(5) Sc	(6) Sc	(7) Sc	(8) Sc	(9) Sc	(10) Sc	(11) Sc	(12) Sc	(13) Sc

16. The nine features range of each hyper cube in terms of range of 9-space content deserves to be chased. Total expression for whole range of Ranges of all 7 hyper cubes takes us through (-1) space content to 13 space content and thereby the emergence of 15 space contents becomes the basic Transcendental range of

space contents whose comprehension, appreciation imbibing and glimpsing shall be bringing us face to face with the formats approach to the organization of Vedic knowledge and its systems and processes.

25. Domains fold chase

1. The domains fold chase of hyper cube 1 to 7 is the chase of space contents of 1-space to 7-space.
2. This chase is going to be the chase of manifestation of space content as domain fold of corresponding hyper cube.
3. Domain folds of hyper cubes 1 to 7 may permit expression as seven steps long range ($a^1, a^2, a^3, a^4, a^5, a^6, a^7$)
4. Parallel to it chase may be as (length, area, volume, hyper volume (4, 5, 6, 7)/
5. This as such shall be amount to resorting to length as a measure / unit, area as measure / unit, volume as a measure / unit and hyper volumes (4, 5, 6, 7) as measure units.
6. This would further bring to focus the transition from (length (linear unit) to spatial (area unit) and from length and area units to volume unit (solid unit) and further to hyper solid units.
7. The inter-relationship of linear and spatial units and of any two units as well would deserves to be chased.
8. The acceptance of area as product of length and breadth, both accepting linear units, as such as well deserves to be revisited.

9. The manifestations of lines and surfaces within surface and approach both to lines and surfaces within surface in terms of spatial units as well deserves to be chased, surface as a set of infinite lines and surface as a track of moving line as well deserves to be chased.
10. Line as a set of infinite points and surface as a set of infinite lines as well deserves to be chased.
11. Point of a line and point of a surface being differently structured as such transition from the structured point of line to structured point of a surface as well deserves to be chased.
12. It would be relevant to note that point as point domain of hyper cubes are structured parallel to the structures of the concerned hyper cubes.
13. This feature of whole range of structures of hyper cube being carried by the point of the hyper cube, as such deserves to be chased
14. The structured point being replica of the domain itself is the feature which deserves to be chased.

26. Boundary folds chase

1. Boundary folds are domain folds but being in the role of boundary of another domain.
2. Domain boundary ratio formulation $a^n : 2n b^{n-1}$, as such adds another features to the format of boundary fold, as much as that boundary splits into $2n$ components.
3. In other words $(n-1)$ space content as domain fold, in $(2n)$ numbers synthesized boundary of hyper cube n .

4. Hyper cubes 1 to 7, as such lead to boundaries range of components (2, 4, 6, 8, 10, 12, 14) respectively.
5. The unity range (1, 2, 3, 4, 5, 6, 7) leading to another unity range (2, 6, 8, 10, 12, 14) deserves to be chased
6. Here it may relevant to note that parallel to boundary components range (8, 10, 12, 14) is the range of (8 vasu, 10 Brahma, 12 Aditaya, 14 bhuwan).
7. Like that the format of boundaries of hyper cubes are parallel to organization formats of Vedic knowledge and its systems and processes.
8. The domains and boundaries themselves avail the formats and features of odds and evens (numbers) formats

27. $(2n+1)$ th Geometry

1. First vedic mathematical topic which need be attended to by the modern mathematics is $(2n + 1)$ th of geometry of n-space.
2. This in a way is going to be an attention to $(2n+1)$ th version of hyper cube n.
3. $(2n+1)$ th version of hyper cube n is (n-space) content manifesting as domain fold being completely free of its boundary fold.
4. In other words n-space as domain fold is being attended to as being free of its whole range of boundary fold.

5. In other words, all the $2n$ boundary components of hyper cube n shall be stripped off from the domain fold of hyper cube n .
6. This as such shall be bringing us face to face with open n -space domain.
7. The open interval as third version of interval parallel to third geometry of 1-space is going to be open n -space domain with $n = 1$.
8. Likewise for $n = 2$, we shall be phase to phase with open 2-space domain / open square / open circle as third version of hyper cube 2 / it would be parallel to fifth geometry of 2-space
9. Open interval as a set (x) accepts the prayer of properties which shall be making it a Topology which may be designated as T_1 .
10. The sequence of topology $(T_1, T_2, T_3, \dots, T_{10})$ is a unique sequence which shall be constituting a measuring rod for hyper cube n domain itself.
11. Modern mathematics, on chase of this sequential range of topologies as a sequence of sequences of topologies $[(T_1), (T_1, T_2), (T_1, T_2, T_3)\dots]$ shall be enriching itself not only in the Discipline of topology but also, particularly in whole range of mathematical analysis.
12. Space, here would get fixed in terms of space content.
13. Further space content would get fixed in terms of its manifestation as a domain fold within special dimensional frame.
14. The fixation of space as space content as manifested domain within specific dimensional frame shall be

taking to the origin as the unifying value which itself shall be manifesting next dimensional domain enveloped within the boundary of the given space content itself.

15. Further the range of geometries of signature 0 to $2n-1$ shall be having boundary components (0 to 2 and -1) respectively.
16. This feature of availability of 0 to $(2n-1)$ boundary components, as such shall be making n dimensional domain being of partial openness with availability of boundary components 1 to $(2n-1)$ and full openness in case of only zero boundary component.
17. The chase of these features shall be suitably enriching the topology of the n -space for all values of n .
18. However the whole range of topologies being countable in number shall be making a transition and transformation for next stage topology to be designated as the origin space topology.
19. It is this reach uptill origin space topology for each space and further the reach of whole range of origin spaces topology shall be exhausting itself by coming in a recycle and renewing mode as the ultimate feature of spatial dimensional order of creator's space (4-space) permitting Transcendence therefrom to solid dimensional order and this Transcendence sequence to continue its attainment for uncountable topological spaces, individually as well as collectively.

28. Shift from half boundary chase to full boundary chase

1. Modern mathematics is held up in its calculus because of the definition of derivative of the function, which is parallel to chase of half boundary.
2. The differential and integral calculus so Disciplined as condition itself it always remain in linear mode and because of it the spatial and higher orders stand ruled out for their coverage.
3. The need is to simultaneously chase '2 as 1' and '1 as 2', which shall be attaining spatial order domains (4-space).
4. Four fold manifestation format of spatial order 4-space is different than that of linear order format of 3-space.
5. This as such is to be taken as second vedic mathematical topic which need by chased by modern mathematics to transcend through its mathematical knots.
6. Mathematical Discipline of dimensional synthesis, which presently is out of reach for the modern mathematical processing, deserves to be chased and with its chase the unnecessarily limitations of modern mathematical analysis will get dissolved of their own.

29. Measuring rod

0	1	2	3	4	5	6
●	—	□	◻	◻	§	⊕
Hyper cubes 0, 1, 2, 3, 4, 5, 6						

1. Unity values flow through the measuring rod format, on its chase shall be

bringing us face to face with the format and features of existence phenomenon within our solar universe with pole star as its origin.

2. The unity values flow path from pole star to Earth is of the expression format $(7+0, 7+1, 7+2, 7+3, 7+4, 7+5, 7+6)$.
3. Unity values flow from pole star is to be of seven streams flow at zero state.
4. One unit flow from pole star to Sun is to be of six streams volume.
5. A step ahead for reach upto space it is to remain only of five streams volume like that it shall be having a sequential reach through air, fire, water as of four three and two streams volumes respectively and final reach at Earth is going to be of single stream unit volume.
6. The unity state value is going to be Earth '7' and sequentially at subsequent stages the same is to be of values range '7, 14, 21, 28, 35, 42, 49'.
7. It is this reach from Earth of value 7 to pole star of value 49 shall be yielding summation value of Earth to Sun range of summation value $7 \times 1 + 2 + 3 + 4 + 5 + 6 = 147$
8. However the total summation value of Earth to pole star range would be $147 + 49 = 196$ units.
9. The unity values of Earth to Pole star range is going to be of the pairing formats $[(1, 7), (2, 7), (3, 7), (4, 7), (5, 7), (6, 7), (7, 7)]$.
10. These pairing formats shall be leading to paired pairs of values sequence $[(1+7), (1 \times 7), (2+7), (2, 7), (3+7),$

(3, 7), (4+7), (4, 7), (5+7), (5, 7), (6+7), (6, 7), (7+7),
(7, 7)

11. These paired values sequence will be of artifices values [(8, 7), (9, 14), (10, 21), (11, 28), (12, 35), (13, 42), (14, 49)] as such the chase of the unity state at Earth is to be in terms of artifices pair (8, 7)
12. These paired values sequence will be of artifices values [(8, 7), (9, 14), (10, 21), (11, 28), (12, 35), (13, 42), (14, 49)] as such the chase of the unity state at Water is to be in terms of artifices pair (9, 14)
13. These paired values sequence will be of artifices values [(8, 7), (9, 14), (10, 21), (11, 28), (12, 35), (13, 42), (14, 49)] as such the chase of the unity state at Fire is to be in terms of artifices pair (10, 21)
14. These paired values sequence will be of artifices values [(8, 7), (9, 14), (10, 21), (11, 28), (12, 35), (13, 42), (14, 49)] as such the chase of the unity state at Air is to be in terms of artifices pair (11, 28)
15. These paired values sequence will be of artifices values [(8, 7), (9, 14), (10, 21), (11, 28), (12, 35), (13, 42), (14, 49)] as such the chase of the unity state at Space is to be in terms of artifices pair (12, 35)
16. These paired values sequence will be of artifices values [(8, 7), (9, 14), (10, 21), (11, 28), (12, 35), (13, 42), (14, 49)] as such the chase of the unity state at Sun is to be in terms of artifices pair (13, 42)
17. These paired values sequence will be of artifices values [(8, 7), (9, 14), (10, 21), (11, 28), (12, 35), (13, 42),

- (14, 49)] as such the chase of the unity state at Pole Star is to be in terms of artifices pair (14, 49)
18. Pole star avails 7-space format with its content manifesting as hyper cube-7 with domain boundary ratio $A^7: 14B^6$
 19. Sun avails 6-space format with its content manifesting as hyper cube-6 with domain boundary ratio $A^6: 12B^5$
 20. Space avails 5-space format with its content manifesting as hyper cube-5 with domain boundary ratio $A^5: 10B^4$
 21. Air avails 4-space format with its content manifesting as hyper cube-4 with domain boundary ratio $A^4: 8B^3$
 22. Fire avails 3-space format with its content manifesting as hyper cube-3 with domain boundary ratio $A^3: 6B^2$
 23. Water avails 2-space format with its content manifesting as hyper cube-2 with domain boundary ratio $A^2: 4B^1$
 24. Earth avails 1-space format with its content manifesting as hyper cube-1 with domain boundary ratio $A^1: 2B^0$
 25. The chase of all these features of unity flow within solar universe can be chase upon measuring rod of hyper cubes 1 to 6.
 26. Pole Star as origin source reservoir of unity state binds the solar universe in unity state..
 27. Sun as the manifestation of solar universe range gets enveloped within Transcendental boundary because of the Transcendental dimensional order of origin of solar universe.

28. Solar universe acquires creative dimensional order because of the unity values flow from origin (7-space), manifest as creative dimensional order (4-space as dimension fold) of manifestation layers (4, 5, 6, 7) as the creative dimensional order (4-space as dimension) itself is of spatial dimensional order as that 4-space and 2-space accept coordination along the manifestation layer (2, 3, 4, 5).

29. And as such the pair of manifestation layers (1, 2, 3, 4) and (2, 3, 4, 5) simultaneously coming to play.

30. It is because of this feature that the unity state existence phenomenon is coordinated along the organization format of 4 x 4 grid format as under

1	2	3	4
2	3	4	5
3	4	5	6
4	5	6	7

31. One shall sit comfortably and permit the transcending mind to continuously remain in prolonged sitting of trans and to glimpse the unity values flow from pole star as origin source reservoir unifying the solar universe of Earth to Sun range.

30. Sunlight Transcendental carriers

1. Sunlight meditation activates Sunlight Transcendental carriers for unity state along Shad Chakra formats of human frame.
2. Sunlight as seven streams flow through pole star as origin source reservoir of solar universe.

3. This seven stream flow within 7 dimensional frame of pole star as origin source reservoir makes out 7 x 7 matrix format of axes
4. The seven dimensional frame being of Transcendental dimensional order (5-space) in the role of dimension, as such coordinates 5-space set up with 6-space set up as artifices pair (56, 65) with summation values $56 + 65 = 121$ parallel to format and features of unification
5. The Transcendence of 5 x 7 coordinates through 7 x 7 matrix of axes shall be of the format of 6 x 6 matrix format of real 36 Transcendence flow stream through the centers of grid zones of 7 x 7 matrix format
6. This Transcendental reach from 7-space as origin source reservoir up till solar domain (6-space as domain) would be parallel to the reach of the Sunlight of 7 streams up till the 6th chakra of human frame having its location at the top tip of head
7. It would be relevant to note that this reach shall be of the coordinates values $7 \times 6 = 42$ which is essentially of the format and features of spatial order creator's space (4-space) accepting Transcendental origin of Transcendental reach from ultimate Nav Braham origin source reservoir.
8. One may have a pause here and take note that this format and features of Sunlight Transcendental carriers flow through 6th chakra makes the existence phenomenon within human frame of Transcendental format and features.

9. It is this feature of Sunlight meditation which deserves to be chased fully for its comprehension and appreciation to have complete imbibing for appropriate glimpsing and insight of this Transcendental phenomenon.
10. This, in a way is the attainment of the order of format and features of Virath Purusha.
11. The Transcendental carrier transcend ahead from 6 x 6 matrix format of Shad Chakra to 5 x 5 format of fifth chakra
12. One may have a pause here and take note that the reach from $7 \times 7 = 49$ to $6 \times 6 = 36$ with difference value $49 - 36 = 13$ is parallel to the 13 geometries range of 6-space.
13. A step ahead the reach from $6 \times 6 = 36$ to $5 \times 5 = 25$ with difference value $36 - 25 = 11$ is parallel to 11 geometries range of 5-space .
14. With this the sequential reach shall be of values range (13, 11, 9, 7, 5, 3) and parallel to it there are (13 geometries range of 6-space, 11 geometries range of 5-space, 9 geometries range of 4-space, 7 geometries range of 3-space, 5 geometries range of 2-space and 3 geometries range of 1-space
15. This way Transcendental unity stands attained for existence within human frame coordinated in terms of Shad Chakras formats which parallel to measuring rod of solar universe synthesized as hyper cube 1 to 6 and of geometries ranges (3, 5, 7, 9, 11, 13) with summation value $(3 + 5 + 7 + 9 + 11 + 13) = 48 = 2 \times 4 \times$

- 6 is going to be parallel to dimensional order of 6-space.
16. Further it also would be relevant to note that $3 + 5 + 7 = 15 = 1 \times 3 \times 5$ is parallel to dimensional order of 5-space.
 17. Further as that $9 + 11 + 13 = 33$ is parallel to synthesis format of a pair of three dimensional frames of half dimension as a three dimensional frame of full dimensions
 18. One may have a pause here and take note that the transition from $1 \times 3 \times 5 = 15$ parallel to dimensional order of 5-space to $3 + 5 + 7 + 9 + 11 + 13 = 48 = 2 \times 4 \times 6$ parallel to dimensional order of 6-space is to be by bridging the gap in terms of synthetic set up of a three dimensional frame as of a pair of three dimensional frames of half dimensions.
 19. Further it also would be relevant to note that artifice value 33 and its synthetic format is parallel to the format of 'seed' while artifice 48 of format and features of dimensional order of 6-space is further parallel to format and features of 'tree'
 20. Still further it shall be bringing us face to face with the phenomenon of coordination of seed entry in terms of Transcendental dimensional order
 21. It is this feature of Transcendental carriers of Sunlight which deserves to be chased fully for its complete comprehension and appreciation and for appropriate imbibing thereof

22. One shall sit comfortably and permit the transcending mind to continuously remain in prolonged sitting of trans to glimpse the phenomenon of Transcendental unity of existence within human frame parallel to the format and features of virath pursha.

31. Synthesis of dimensional axes

1. Sankhya Nishtha avails artifices of numbers along dimensional formats.
2. Synthesis of dimensional axes and parallel to it artifices deserves to be comprehended.
3. Synthesis of a pair of dimensions of order n (n -space in the role of dimension) leads to $(n+2)$ domain and as such pair of artifices (n, n) leads to synthesis value $(n+2)$.
4. The reverse process of these synthesizing of n domain shall be leading to the pair of dimensions of order $(n-2)$ that is, as that $(n-2)$ space shall be playing the role of dimension of n domain
5. With it the Brahman range of 1-space domain to 9 space domain shall be leading to dimensional orders range of (-1) space in the role of dimension to 7-space in the role of dimension
6. It may be expressed as 9-space domain de-synthesizes itself as $(7\text{-space}, 7\text{-space})$
7. This feature may be expressed as that $(9) = (7, 7)$ and simultaneously it also would be taken as $(7, 7) = 9$

8. Like that $(8, 8) = 10$ and $(10, 10) = 12$ shall be giving us an insight about this relationship of dimension folds and domain folds.
9. In addition the place value format and arithmetic operations accepted by numbers shall be bringing to focus other features like $(7, 7)$ leading to $7+7$, 7×7 , as well as to artifice 77.
10. All these features deserves to be chased simultaneously to chase the Sankhiya Darshan as speaking language formulations of an alphabet which avails geometric formats and organizations thereof in terms of values permitting association of number values.
11. The other feature of mathematics of synthesis values of triple dimensions of any order being '6', deserves to be chased with pointed attention as that this feature plays a prominent role.
12. The triple $(6, 6, 6)$ being of value '6', deserves to be comprehended well.
13. It is with full appreciation of the feature ' $6, 6, 6$ ' = 6 that one may have proper insight about the self referral domain (6-space) as dimension, synthesis of pair of dimensions of self referral order (6) leading to self referral domain (6-space) and further even the synthesis of triple dimensions of self referral order (6-space as dimension) leading to self referral domain (6-space)
14. It is this feature of 6-space / artifice 6 / 6 as first perfect number which deserves to be fully imbibed.

32. Follow Ganita Sutras format

About Present Chase

1. Ganita Sutras manifest mental mathematics systems and processes. With it, the natural promise is, by Transcendence through this manifestation format, the values of progressive evolutionary intelligence field will come into play. As such, the present study aims to glimpse this. Accordingly it is being approached as chase – initiation steps.
2. It is axiomatically been taken as that ‘Ganita Sutras’ text, as it is, is a complete scripture in itself. Further it also is being axiomatically accepted as that it is part of Vedic knowledge systems and processes.
3. Still further it two is being axiomatically accepted as that these Sutras being part of Vedic knowledge and system and same being complete scripture in itself as such the Transcendental origin source reservoir of soul syllable Om is always available for initiation and for the reach at thy synonam Parnava (Tasay Vachka Parnava).
4. It would be going to be like five syllable mantra (panch akshra mantra namah Sivah पंच अक्षर नम शिवाय) goes Transcendental as ओम नम शिवाय Om Namah Sivah.

5. This tag with Transcendental origin source reservoir as such provides transition for the four fold manifestation formats into five fold Transcendental formats and with it Transcendental (yoga / unison) formats come into play and the end fruit attainment comes to be in the form of 'Parnava' as Vachka 'वाचकः' / synonym of soul syllable ॐ Om.
6. As is the enlightenment of 'Patanjal yoga darshan'.
7. With it Ganita Sutras text (एकाधिकेन पूर्वेण:.....)for its chase – initiation steps shall be getting tagged with Transcendental origin source reservoir and the text would emerge as 'ॐ एकाधिकेन पूर्वेण:-----'
8. With availability of Transcendental origin source reservoir ॐ (Om), the Transcendental code values for the individual alphabet letters, as well would become available.
9. Simultaneously it also would remain in point of focus that the soul syllable Om (ॐ) of creative format with Transcendental base and as such the whole range of values and virtues of creator's space (4-space) as well would be marking their presence .
- 10.The spatial order of creator's space (4-space) as such shall be surfacing artifice values 16 for soul syllable (ॐ).
- 11.Here it also would be relevant to note that this value is parallel to Transcendental code value for anunasik elongated ukara as anusara accepts TCV value 10 while elongated ukara accepts values 6 with these opening words about the present chase, the chase –

initiation steps for progressive evolutionary intelligence along Ganita Sutras format, the follow up may be of the steps being reach at in the present study.

33. Ganita Sutras Intelligence format

Progressive evaluation of Intelligence with pure and applied values of Ganita Sutras

I. Introductory, II. Knowledge, III. Ved, IV. Ganita Sutras V. Devnagri alphabet VII. Artifices of numbers and Dimensional frames of spaces VIII. Intelligence Evolution within consciousness domain IX Ganita Sutra-1 and Ganita Upsutra – 1

Introductory

1. Present chaise is of the role of pure and applied values of Ganita Sutras, in progressive evaluation of intelligence.

Knowledge

2. Pure knowledge has its inherent virtue to organize its own values.
3. This self organizing feature settles its formats, systems, processes and orders.

4. As such organized knowledge simultaneously unfolds pure and applied values. Such simultaneously emerging knowledge of its pure and applied values, that way leads to their complementary and supplementary nature.
5. This complementary and supplementary nature leads to their parallel manifesting for Transcendence from to be of self-referral orientations for attaining unity state.
6. Such unity state is going to be parallel to the inherent existence vibrant bliss of PURE KNOWLEDGE

Ved

7. Ved (वेद) as per vid root (विद्) is of two fold values, namely (i) 'known' (ii) to know'.
8. Vedic scriptures, that way, simultaneously carry pure known values as well as the features 'to know' and the 'known'.
9. With it, every Vedic scripture deserves to be approached for both facets of knowledge.
10. That way, whole range of pure state knowledge is unified whole. This makes it single wholesome domain.
11. 'Ved' as 'Vedas' and 'Vedas' as 'Ved' are just expressions of this 'wholesome domains'.
12. This wholesome domain being of whole range of values, may it be of unity state, self referral state, Transcendental state or of manifestation state. So the

Purnam 'पूर्ण' value blissful vibrates in every bit of grain of knowledge domain.

मै पूर्णविद्.....

Sole syllable (om)

This is full. This is full. Full surfaces out of full. With full surfacing out of full, that what remains after surfacing as well as full.

- 13.As per this value of fullness, every scripture even being a part of another scripture, remains self-sustained complete scripture. This so, is vibrant in case of ganita sutras, being the self sustained complete scripture.

Ganita Sutras गणित सूत्राणि:

14. Ganita Sutras as a self sustained scripture accepts sole syllable (Om) as source reservoir of values and its synonym Parnava 'प्रणवः' as the attainment value
- 15.As such Text begin as
'ॐ एकाधिकेन पूर्वेण' and its concludes as
'गुणितसमुच्चयः समुच्चयगुणितः प्रणवः'
- 16.Text being Devnagri script as such the working acquaintance with Devnagri alphabet is going to be the first pre-requisite for proper comprehension and appreciation of the virtues, values and features of the virtues, values and features of its formats, systems and processes.

Devnagri alphabet

स्वर

अ	इ	उ	ऋ	लृ	ए	ओ	ऐ	औ
---	---	---	---	----	---	---	---	---

वर्गा

क्	ख्	ग्	घ्	ङ्
च्	छ्	ज्	झ्	ञ्
ट्	ठ्	ड्	ण्	ढ्
त्	थ्	द्व	ध्व	न्
प्	फ्	ब्व	भ्व	म्

अन्तस्थ

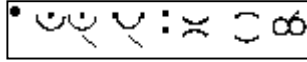
य्	र	ल्	व्
----	---	----	----

उष्मण

श्	स्	ष्	ह्
----	----	----	----

यम

Sankhiya Yog Artifices Unison



17. Artifices unison is one concept which the vedic approach becomes decisive as the essence of processing initiation.
18. Vedanta, being the essence of Vedas, and Vedantra tri, Upanishads, Brahma Sutra and Geeta as essence of Vedanta and ahead Geeta as essence of Vedanta tri leads to Nishtha, the established processing process, being of two folds, namely Sankhiya Nishtha and Yoga Nishtha.
19. 'Sankhiya' being one of the aspect of Yoga, as such 'Sankhiya Yog' becomes the cultivating essence.

20. Sankhya Nishtha presumes existence of geometric formats and avails artifices of numbers along geometric formats parallel to dimensional frames. On the other hand, Yoga Nishtha presumes existence of artifices of number was avails dimensional frame parallel to artifices of numbers.

21. With it unison of artifices of numbers and dimensional frames becomes the essence value which deserves to be imbibed.

VII Artifices of numbers and Dimensional frames of spaces

22. 'Numbers and space' are our most intimate concepts about which every one has 'intuitive idea'. The intelligent cognition progressively surfaces with evolutionary unfolding of INTELLIGENCE within Consciousness domain.

23. Numbers to artifices of numbers and space to dimensional spaces are parallel cognition surfaces for whose chase, one may initiate oneself with a pair of triples of numbers and dimensional bodies, namely (i) 1, 2, 3 and (ii) lines, surfaces, solids)

24. This initiation, initially intuitively and thereafter cognitively lead to proper comprehension and appreciation of:

- i. 1 as 1 space and line as 1 space body
- ii. 2 as 2 space and surface as 2-space body. And
- iii. 3 as 3 space and 'solid' as 3-space body'
- iv. And ahead 4 as 4 space and hyper solid 4 as 4 space body, and so on.

Intelligence Evolution within consciousness domain

25. It is the consciousness field within which the intelligence progressively evolves. That being so, it the consciousness field which is to be taken care of.
26. Consciousness to intelligence to knowledge are the state interlinking steps. One way to look at this pair of steps is of pure and applied values respectively.
27. These pure and applied values may be approached along Transcendental and manifested formats. These as well may be accepting approach as yoga Nishtha and Sankhya Nishtha respectively.
28. For union thereof, One shall sit comfortably and permit the transcending mind to dive deep in the consciousness field which stand created in the process and to glimpse and to be face to face with the way the consciousness impulses manifests intelligence processing surfaces for and as processing chase formats measures.
29. Processing chase measures' manifesting as artifices of numbers and dimensional frame and sustaining our existence phenomenon within solar universe and even solar universe itself deserves to be imbibed for proper insight of reality of our solar universe existence as well as of our existence as and within human frame.

Ganita Sutra-1 and Ganita Upsutra – 1

‘ॐ एकाधिकेन पूर्वेण सूत्र १
आनुरूप्येण उपसूत्र २’

30. ॐ (Om) is sole syllable Braham.

31. (ॐ इति एक अक्षर ब्रह्म)

32. The Transcendental code leads to (ॐ) being of value
16 (10 + 6)

33. TCV (ॐ) = TCV (') + TCV (□)

34. With it, □ as Transcendental source reservoir, unfold
itself as artifice value 16 which manifests as value
range 1 to 16 which manifests as value range 1 to 16,
along which as value range 1 to 16, along which
manifests text of Ganita Sutra-1, which presiding
avails 16 letters:

ए	क्	आ	ध्	इ	क्	ए	न्	अ
प्	उ	र्	व्	ए	ण्	अ		

35. And then there are precisely 16 Sutras; accepting
sequentially letters 1 to 16 of Ganita Sutras, to be the
structural keys of Ganita Sutras 1 to 16 in sequence
and order with first letter ‘ए’ holding structural key of
Ganita Sutras itself.

36. Transcendental code values of 16 letters range comes
to be

i	ii	iii	iv	v	vi	
6	4	2	2/2	1/2 as 1, 2	4	
vii	viii	ix				
6	8	1				
x	xi	xii	xiii	xiv	xv	xvi
5	6	2	7	6	7	1

34. Chase of Intelligence evolution

Introductory

1. Intelligence evolution is of self formatting features.
2. Evolution as self formatting organization is of the nature of self interactive formats.
3. This results into zoom lines manifesting paragraphs.
4. The resultant sequential ordering in terms of points of zoom line as structured bits manifest mental blocks, the dissolutions of mental blocks permissible in terms of Transcendence through structured bits of zoom lines being the mental building blocks takes to progressive evolution of intelligence within the consciousness field.
5. With it the chase of intelligence evolution becomes the Discipline of transition from intelligence domain to consciousness field.
6. This chase, essentially being within spatial order creator's space (4-space) accepting solid order Transcendental origin, as such the Transcendence phenomenon itself becomes of two fold phases, the first of which takes us from intelligence domain to consciousness field and the second phase takes from consciousness field to hyper meta physical domains.

7. This organization format of progressive evolution of intelligence within consciousness field runs parallel to the organization format of Ganita Sutras and as such pure and applied values of Ganita Sutras may be blissfully availed for inclination of progressive evolution of intelligence for young minds.

Pure and applied values of Ganita Sutras

8. The pure and applied values of Ganita Sutras run parallel to each other.
9. For chase of pure and applied values of Ganita Sutras the sequential order of organization format of Ganita Sutras deserves to be followed and imitation, that way is to be from the very first letter of the very first Ganita Sutra itself namely 'ए' / sixth vowel which accept association of artifice 6 and geometric format of hyper cube 6 / 6-space.
10. This initiation with artifice 6 / hyper cube 6 / 6-space, as such, straight a way takes us to Sun / soul / Vishnu lok / real 6-space
11. One may have a pause here and sit comfortably and permit the transcending mind to continuously remain in prolonged sitting of trans and to glimpse the role of 'Sun' in our solar universe and parallel to it the play of soul as human being.
12. The reach from first letter 'ए' / sixth vowel to the last 16th letter 'अ' / first vowel of Ganita Sutra-1, as such is chase of the features of Sun / soul / 6-space

13. One may have a pause here and take note that as the format and features of first letter of the text of Ganita Sutra-1 leads to sequential unfoldment of the entire range of features of the organization format of Ganita Sutra-1 itself, likewise second to sixteenth letter of the text of Ganita Sutra- 1 shall be respectively leading to the formats and features of Ganita sutras 2 to Ganita Sutras 16 in that sequence and order.
14. It would be blissful to have sequential evolutionary progression of intelligence domain parallel to the sequential organization formats of Ganita Sutras 1 to 16 in that sequence and order

Ganita Sutra-1 and Ganita Upsutra-1

15. Ganita Sutras ‘individual organization domains’ that way manifest, each sutra domain being a complete organization in itself.
16. This feature, as such manifests transition domains for reach from given sutra domain to next Sutra domain.
17. This transition reach roles are played by Ganita Upsutras
18. It is this complementary and supplementary role of Ganita Upsutra which deserves to be comprehend and appreciated well as in terms of it the transition may be had from pure values to applied values of Ganita Sutras as well as a reach from applied values to pure values of Ganita Sutras.

19. It is the integrated text of Ganita Sutras and Upsutras which makes the complete domain of pure and applied values of Ganita Sutras (including Ganita Upsutras)
20. As such the proper initiation for progressive evolution of intelligence may be had parallel to pure and applied values of Ganita Sutra (including Ganita Upsutras) by beginning the chase with integrated text of Ganita Sutra – 1 and Ganita Sutra – 2, which together avail $16 + 10 = 26$ letters range and with it artifice 26 becomes the basic artifice.
21. One may have a pause here and take note that the initiation with the text of Ganita Sutra – 1 as such is focuses upon artifice 6 as the basic artifice , while initiation with integrated text of Ganita Sutra and 1 and Ganita Upsutra-1 focuses upon artifice 26 as the basic artifice.
22. One may further have a pause here and take note that artifice 6 takes to 6-space / Sun / Vishnu lok while artifice 26 takes to 26 elements range of Vishnu lok / 6-space and there are 26 meters (chandras) which attain Vishnu lok
23. One may further have a pause here and take note that number 6 is the first perfect number.
24. Further as that geometric envelop of cube is of 26 structural components and total range of primes including one uptill 100 are 26.

35. Progressive evolution step

1. Format set up of points
 - a. Along line
 - b. Along surface
 - c. Within space
2. Sequential setting of values
 - i. In sequential increasing order
 - ii. In sequential decreasing order
 - iii. In sequential functional forms
 - a. As per define functions
 - b. Undefined functions
3. The symmetry
 - i. Of proportional values formats
 - ii. Of geometric formats seal
 - iii. Transcending manifestation
4. Transcending countable
 - i. Uncountable as unit
 - ii. Infinite in finite
 - iii. Zero as unit
5. Part as a whole
 - i. Point as a line
 - ii. Short line equal to long line
 - iii. Both thick and thin being full
6. Space
 - i. As a ray
 - ii. As a pair
 - iii. As expending and squeezing
7. Birth – Death – Rebirth
 - i. Seed – Tree – Seed
 - ii. Ion Fire precedes both egg an hen

- iii. Emergence of human frame from within human frame
8. Void
- i. Void
 - ii. Devoid
 - iii. Devoided
9. Black matter
- i. Black
 - ii. Half black
 - iii. Light
10. '1 as 2' and '2 as 1'
- i. 1 as 2
 - ii. 2 as 1
 - iii. 1 as 2 and 2 as 1
11. Three dimensional frame
- i. Three dimensional frame
 - ii. Split as a pair of three dimensional frames of half dimensions
 - iii. Synthesis of a pair of three dimensional frames of half dimensions.
12. (3, 7)
- i. (3, 7)
 - ii. (37, 73)
 - iii. $(37+73) = 55 + 55$
13. Dimensional synthesis
- i. $n \times n = (n + 2)$
 - ii. $(-n, -n) = (-n+2)$
 - iii. $(n, n, n) = 6$
14. Pentagon

- i. Pentagon
- ii. Pentagon within pentagon
- iii. Pentagon within pentagon and infinitum

15.Sphere

- i. Sphere
- ii. Eco sphere
- iii. New eco sphere

16.New

- i. 42
- ii. Spatial order
- iii. NVF (Five) = NVF (Nine)

17.Triloki and Trimurti

- i. Triloki
- ii. Trimurti
- iii. Triloki and Trimurti

18.Ved

- i. Ved as Vedas
- ii. (Rik, Yaju, Sam, Atharav)
- iii. Vedas as ved

36. Progressive Evolution of Intelligence

Section – 1 Initiation lessons

Introductory

1. Progressive evolution of intelligence? Is the phenomenon whose chase in itself is a very delicate

Discipline as here it is the ‘transcending mind’ which shall be in a self interactive state with itself.

2. Intelligence marks its presence when it becomes vibrant at the core of consciousness. Till then, intelligence remains sub merged with the impulses of consciousness bits. It that way is the sleep state of intelligence within consciousness bits.
3. The awakening state becomes the vibrant state and intelligence starts marking its presence loudly over the consciousness states. That way intelligence leaves behind consciousness as its sleep state.
4. Sleep state itself being of formats of deep sleep state and dream state, as such the intelligence emergence state is going to be phases and stages of dream state and deep sleep state.
5. Therefore the seeds of intelligence index of young minds shall be taking us to dream state and thereafter to ‘deep sleep state’
6. The deep sleep state and dream sleep state values shall be manifesting the intelligence index of awakening state.
7. This index in terms of its pre-manifesting phases and stages format of dream sleep state and deep sleep state are ultimately going to follow the Transcendence path of Transcendence through this awakening state manifested index of intelligence.
8. The Transcendence path in terms of its inherent self referral features shall be settling the progressive evolutionary progression of intelligence which shall be

attaining unity state of growth for the young minds as fully grown up minds.

9. Ganita Sutras follow the Transcendence path and this being so the Ganita Sutras have great promise. Ganita Sutras text, as it is, from its first letter to the last letter, deserves to be chased in that sequence and order. However Ganita sutras has a complete scripture shall be accepting sole syllable om as its Transcendental source reservoir and its synonym Parnava being the fruit of pure and applied values of Ganita Sutras.
10. With it beginning is to be with 'ॐ' while the ultimate attainment would be 'Parnava'

Initiation step

1. Initiation step of Transcendental chase of Ganita Sutras is to be along the format, features and values of 'ॐ' 'Om'
2. The formulation Om is of four components namely 'i' Bindu Sarovar 'ii' Ardh Matra 'iii' Tripundam and 'iv' Swastik pada
3. The Transcendence through these four component set up shall be leading to Transcendental base being the fifth fold of the four fold manifestation layer.
4. Bindu Sarovar / point reservoir is of the format of a structured point.
5. Transcendence through Bindu Sarovar is of the format of seven streams flow

6. This flow fulfills the gap between the first component (Bindu Sarovar) and second component (Ardh Matra).
7. The Transcendence as such from first component is of linear order (of seven stream) and its reach is only uptill the point beyond which linear order transit and transforms and comes within the domain of the second component (Ardh Matra)
8. It is going to be a reach by way of transition from line order to spatial order set up.
9. One may have a pause here and take note that the transition from linear order to spatial order is the transition from Triloki to creator's space (4-space)
10. Within spatial order creator's space (4-space), there is simultaneous availability of $(1/2)$ and $(2/1)$ unis.
11. The conceptual term 'Ardh Matra' accepts simple English rendering half units'.
12. One may further have a pause here and take note that the Transcendence ahead from within the second component, as such shall be amounting to a transition from spatial order to solid order.
13. One may further have a pause here and take note that within spatial order creative space, a three dimensional frame splits into a pair of three dimensional frame of half dimensions.
14. Still further it also would be relevant to note that 3-space accepts 7 geometries range.
15. Therefore the Transcendence from second quarter with it reach up till third quarter, as such is going to be of attainment of the split for seven streams as of three

- folds, with first fold of three streams leading toward east, the second fold of three stream leading towards west and third fold as central stream continuing flowing ahead and having reach uptill fourth quarter
16. One may have a pause here and take note that within creator's space (4-space), the tree dimensional frame split into a pair of three dimensional frames with common origin, which itself accepting synthetic format of pair of halves with common center and the process continuing ad-infinitum along the Transcendental path as compacitification format for the origin / center / middle flow line
 17. Here it further would be relevnt to not that the square split into quadruple quarters while triple quarter synthise to integrate with them into four quarter as unmanifest quarter
 18. It has this synthesis of three manifest quarter parallel to seven geometries range of two space into quadruple quarter format into nin geometries range of 4-spac shall be leading us to artifices pair (9, 7) which is parallel to organization of Ganit Sutra-1 being pair of sub formulation i. ekadhikena and ii. Purvena availing precisely 9 and 7 letters formulations
 19. One may have a pause here and take note that the synthesis of tripe quarters as of the format of quadruple quarters shall be bringing us back the start with position of Bindu Sarovar / Structured point being of a cyclic order making the Transcendental flow being of initiation point of creator's space (4-space) / Brahman

domain of 9 streams sequentially leading to 9 streams to 7 streams, 7 streams to 3 streams and 3 stream to 1 stream as one flow path to manifest as the Transcendence path and the other flow path as the Transcendence path as well being of same flow values being their because of the spatial order of creator's space (4-space).

20. The summation value $9 + 7 + 3 + 1 = 20$ as comparison to the summation $9 + 7 = 16$ is just an extension from four fold manifestation layers of vales 4×4 of five fold Transcendence range of value 5×4 .
21. One may further have a pause here and take note that the TCV (वेद) = 20
22. Still further it also would be note that NVF (letter) = NVF (creator) = 80 and NVF (spirit) = 100 and artifices pair (80, 100) as well as 16 , 20 and (4, 5) are of parallel format values
23. With it the promise of Ganita Sutras to attain values of the order of the Vedas is self evident being inherently there in the spirit of the letters of the text of Ganita Sutra
24. Still further it would be relevant to note that Vedas enlighten us as that 'रिचो अक्षरे प्रमेय व्योमन' that within Akshras (syllables) of richas (hymns) are vibrant Transcendental spaces.

37. Transcendental Glimpses phases

Opening words

1. Transcendental glimpse of Progressive evolution of intelligence within consciousness states is of phases and stages parallel to the organization values of Ganita Sutras. The initiation of Transcendental glimpse of progressive evolution of intelligence within consciousness field, as such is to be of initiation values parallel to the values of soul syllable Om (ॐ) initiation. This initiation, in itself is the initiation phase of transcendental value parallel to artifice '16'.

Initiation phase

2. One shall sit comfortably and permit the transcending mind to transcend through soul syllable Om (ॐ). The Transcendence, as such is to be through four components format of soul syllable Om (ॐ) namely through Bindu Sarovar, Ardh Matra, Tripudam and Swastik pada. The Transcendence through these four sequential steps is to be of coordination parallel to quadruple artifices (1, 2, 3, 4) and same as such, being spatial flow is to be of values $4 \times 4 = 16$. The organization of artifice $16 = 1 + 14 + 1 = 1 + (2 + 3 + 4 + 5) + 1$ shall be leading to hyper cube 4 format for the middle as of four fold manifestation layer (2, 3, 4, 5) of hyper cube 4

First Transcendence phase

3. The first Transcendence phase is to be along the format and features of first letter 'ए' which shall be making the Transcendence path as to be of self referral range of artifice 6.
4. One shall sit comfortably and permit the transcending mind to continuously remain in prolonged sitting of trans deep trans and glimpse while Transcending through 6-space / Sun / hyper cube 6.
5. 6-space is of creative dimensional order (4-space in the role of dimension of 6-space). The Transcendence through 6-space (domain), as such shall be taking uptill Transcendental origin (5-space as origin) of creative dimensional order (4-space as dimensional order) of 6-space.
6. One shall sit comfortably and permit the transcending mind to continuously remain in prolonged sitting of deep trans and to glimpse this reach of Transcendental through 6-space domain of hyper cube 6 having a reach uptill Transcendental origin of creative dimensional order (4-space as dimension of 6-space).
7. One may have a pause here and take note that 6-space as self referral domain is having unity state origin (7-space in the role of origin of 6-space) and 7-space itself is of a Transcendental dimensional order (5-space in the role of dimension of 7-space).
8. It would further be relevant to note that 4-space plays the role of dimension of 6-space but 4-space accepts 5-space in the role of its origin, while 7-space plays the

- role of origin of 6-space but 7-space itself accepts 5-space in role of its own dimensional order.
9. It would be blissful to take note that 5-space while on the one hand plays the role of origin of 4-space, and on the other hand 5-space plays the role of dimension of 7-space, it is this simultaneous role of 5-space, as Transcendental origin of creative dimensional order of self referral domain, and further Transcendental dimensional order of unity state origin of self referral domain, which that way makes the attainment of first Transcendental phase being of a range of very big Transcendental values
 10. It is this attainment of Transcendental values during first state Transcendence itself along format and features of very first letter of the text of Ganita Sutra, which on the face of it gives us blissfully a very promising lead for the Transcendental values vibrating at the base of organization format of Ganita Sutra
 11. Infact the attainment of first Transcendence phase may be designated as a reach at the vibrant Transcendental domain itself within self referral domain which simultaneously promises Transcendence at the origin of 6-space as domain fold and also at the origin of 4-space as domain fold, which otherwise is in the role of dimension of 6-space.
 12. Still further it also would be relevant to note that artifices pair (6, 4) and parallel to it the dimensional spaces pair (6-space, 4-space) accepting coordination as (artifice, number) / dimension fold, domain fold and

there been a jump over the Transcendental gap value (5) / (5-space). Still further it also would be relevant to note that the double digit number of five place value system shall be permitting organization along (5, 1) x (5 + 1) matrix format.

13. Still further it also would be relevant to note that this Transcendence attainment from self referral domain (6-space) to Transcendental domain (5-space) as such provides us the organization format of fulfilling of the gap of the artifices pair (6, 4) with a Transcendental values (5). Such glimpsing value is of 'seers' / ऋषि 'Rishi' and the glimpsed domain within 5-space / Transcendental domain is of Transcendental values of divine reach of gods (Devta देवता)
14. It would be a blissful to visit and revisit the Transcendental values fulfilled within the gap of artifices pair (6, 4) / 6-space, 4-space

Second Transcendence phase

15. One shall sit comfortably and permit the transcending mind to transcend through the format and features of second letter 'क्', which is of compactified formats of 'क् ब्रह्मा' and 'क् शिव'
16. These features of format of letter 'क्' are parallel to the format of spatial order 4-space with solid order Transcendental origin being in the role of creative dimensional order of self referral domain

17. One may have a pause here and take note that the Transcendental through creative domain (4-space) as domain shall be bringing us face to face with the Transcendental origin which is of solid order and parallel to it there being solid origin of spatial dimensional order of creator's space (4-space).

38. Shrimad Bhagwad Mahapurana

1. Shrimad Bhagwad Mahapurana is the scripture which is carrying the essence of end fruit of the wisdom and enlightenment of Vedas.
2. This is a complete devotional scripture of Brahman virtues flourishing as Virat pursha
3. The way Virat Purusha under its own Grace flourishes as and within Purusha is being glimpsed here in the scripture.
4. Each Sadkha devoted to Virat Purusha glimpses and fulfills oneself with Brahman values and virtues expressing as Virat Purusha.
5. The scripture sequentially unfolds and takes through 12 Scandas of chapters range (19, 10, 33, 31, 26, 19, 15, 24, 24, 90, 31, 13).
6. This organization of Scripture as 12 Scandas and 334 Chapters is parallel to the organization of Transcendental boundary (5-space as boundary) of self referral domain (6-space).
7. This as such parallel to the manifested format of hyper cube 6 within creator's space (4-space).

8. With it the enlightenment about Virat Purusha is shared by Lord Brahma, creator the supreme with Devotees
9. The scripture in its integrity is availing the format of real 6-space.
10. The organization of scripture as 12 Scandas is parallel to organization of Transcendental boundary.
11. This organization is parallel to :
 - i. 5-space in the role of boundary of 6-space splitting into 12 components
 - ii. Further it is parallel to the organization of Dwadash Adityas (12 suns)
 - iii. Still further it is parallel to the organization of Dwadash lingam
12. The organization of 12 components of Transcendental boundary as 334 chapters is parallel to the split of a three dimensional frame and its creative origin as a pair of three dimensional frames and organizing parallel to artifice 334.
13. The chase of this organization sequentially is to be of 12 steps of artifices values range (19, 10, 33, 31, 26, 19, 15, 24, 24, 90, 31, 13)
Artifice value (19, 10, 33, 31, 26, 19, 15, 24, 24, 90, 31, 13)
14. The split of a sphere into a pair of hemispheres accepts placement values triples (17, 18, 19) with artifice value 18 for placement of the center of the sphere and artifices pair (17, 19) being the pair of placements values of pair of hemispheres.

15. With it the range of numbers of chapters of first scandal as 19 chapters stands settled as par the above organization format for the split of a sphere into a pair of hemi-spheres.

Artifices 10

16. It would be relevant to note that dimensional synthesis of pair of solid dimensions synthesizes value 5 parallel to Transcendental domain (5-space as domain).

17. The Transcendental domain remains wrapped within creative boundary (4-space) of 10 components.

18. One may have a pause here and take note that the split of sphere as a pair of hemispheres leads to a pair of three dimensional frames while the origin stands isolated with placement at middle of the organization.

19. It would further be relevant to note that the placement value of center being 18 and further as artifice 18 permit re-organization as $18 = 3 + 4 + 5 + 6$ parallel to four fold manifestation layers (3, 4, 5, 6) of hyper cube 5 with 5-space content manifesting Transcendental domain (5-space as domain) wrapped within creative boundary (4-space as boundary).

20. These features as such shall be sequentially leading to artifices range (19, 10, 33 and ahead to a solid dimensional order (3-space in the role of dimension) while 3-space as cube as its representative regular body and cube itself is a set up of 31 structural components

- (12 corner points, 8 corner points, 12 edges, 6 surfaces, 1 volume, 3 axes and 1 origin)
21. One may have a pause here and have a fresh look at the set up of the cube and it would come to focus that the geometric envelope of cube is synthesized in terms of 26 components (8 corner points, 12 edges and 6 surfaces).
 22. One may have a pause here and take note that there are precisely 26 primes including one up to 100
 23. Still further as that there are 26 meters / chandas for a reach up to Sun .
 24. Further there are precisely 26 sporadic groups/
 25. There are 26 elements of Vishnulok
 26. With it the organization of fifth scandh as 26 chapters stands settled accordingly
 27. One may have a pause here and take note that the reach for the sixth component of Transcendental boundary of self referral domain is to be as per the re-application of the Transcendental measuring rod (measuring rod of 5-space).
 28. With this re-application the start with organization value of first scandal as 19 will be available for the value of six scandal as well
 29. One may have a pause here and take note that the first of the organization namely (19, 10, 33, 31, 26, 19) stands covered
 30. A step ahead is to be of the value of 5 step long Transcendental measuring rod reach as (119, 18, 17,

- 16, 15) which is going to be uptill value 15 which becomes the organization value of seventh scanda.
31. One may have a pause here and take note that the 7-space accepts $2 \times 7 + 1 = 15$ geometries range
32. Further as that artifice 15 permit re-organization as $15 = 1 \times 3 \times 5$ which is parallel to the dimensional order of 5-space
33. One may have a pause here and take note that artifice 15 further permit re-organization as $15 = 3 \times 5 = (4 - (-1)) \times 4 + 1$.
34. The next sequential step ahead of value $(4 - 1) \times 4 + 1$ comes to be $(5 - 1) \times (5 + 1) = 24$
35. One may further have a pause here and take note that the transition from artifice 7 to artifice 8 and parallel to it the transition from seventh scanda to 8 scanda as such is going to be the transition from linear order to spatial order and as such the sequential steps ahead of value 15 shall be the pair of values 24, 24.
36. With it the organization of 8th and 9th scandal stand settled simultaneously parallel to values 24 and 24
37. One may have a pause here and take note that the $24 + 24 = 48 = 2 \times 4 \times 6$, which is parallel to the dimensional equivalence of the dimensional order of 6-space.
38. This attainment as such, shall be leading ahead to value $15 \times 6 = 90$.
39. One may have a pause here and take note that the $90 = 45 + 45$ while $45 = 1 + 2 + 3 + 4 + 5 + 6 + 7 + 8 + 9$

40. One may have a pause here and take note that the artifice 90 permit organization as $90 = 46 + 44$ which is parallel to artifices pair format (46, 44) which is parallel to 'domain, dimension' format, with its dimensional value 44 permits its re-organization as a reflection pair of artifices pair (31, 13).
41. These features of organization of 12 scandas as 334 chapters deserves to be comprehended well and to be appreciated fully to imbibe these values and virtues to glimpse the organization format of enlightenment of the order of Virat Pursha.

39. First stage exposure

Outline of topics chase

Basic Arithmetic operations

- Basic four arithmetic operations
- Multiplication as powers addition
- Reflection as operation.
- Horizontal and vertical reflections pairings
- Simultaneous availability of '2' as '1' and '1' as '2'

Number Systems

- Counting times to complex numbers
- Artifices of numbers

- Artifices of numbers and dimensional frames
- Synthesis of dimensional values
- Polygon sequence

Modern mind and Ancient Mind

- Numbers line and hyper line
- Pentagon and transcendence
- (1, 2, 3), (1, 3, 5)
- (6, 28)

Intelligence field

- Shad Chakra format
- Measuring rod
- Earth to Sun range
- Ganita Sutras Organization
- Format of progressive evolutionary intelligence field

Topic I Basic Arithmetic operations

This topic devotion as the title suggests is to our most familiar Arithmetic operations namely addition, minus, multiplication and Division. These concepts have been there with us since the day we have been formally and informally being exposed to ‘counting’, on finger or with pebbles. How big is the coverage of mathematical

domain by these operations, must have been of ever widening range. With continuing intensity of conscious attention about pure applied values operations. I am sure that the urge to fathomed further depths of these domains must be continuing in unstated state even for those feel their going from gray to while hairs gaps for their scalps covering their brains to sustain mind as intelligence field level in consciousness states.

The reality of human mind is that it soon starts manifesting its mental blocks, primarily for preserving the consciousness implies as consciousness state but as a result, that way this also amount to approaching as a set of brackets. With in advantages for young minds

Become when small series who are manifesting for whose coordination and transitions from one phase of mental block to another of mental block living no option for renewal resource formatting mental blocks. This, that way brings to face to face the solemn responsibility which cast upon us as Vedic mathematics teachers the exposure of young minds to basic arithmetic operations that way is going to be of utmost delicate think as whole of the subsequent foundation of mathematics is to be built and to be sustained in terms of these concepts. Let us have a pause and remind ourselves as to what precisely convinced to us ‘addition’, or ‘minus’ / multiplication or Division. Starting with ‘addition’, it would immediately flash before our eyes the symbol ‘+’. Let us have a pause here and revisit this symbol ‘+1’

- Basic four arithmetic operations
- Multiplication as powers addition
- Reflection as operation.
- Horizontal and vertical reflections pairings
- Simultaneous availability of '2' as '1' and '1' as '2'

Topic II Number Systems

- Counting times to complex numbers
- Artifices of numbers
- Artifices of numbers and dimensional frames
- Synthesis of dimensional values
- Polygon sequence

Topic III Modern mind and Ancient Mind

- Numbers line and hyper line
- Pentagon and transcendence
- (1, 2, 3), (1, 3, 5)
- (6, 28)

Topic IV Intelligence field

- Shad Chakra format
- Measuring rod
- Earth to Sun range
- Ganita Sutras Organization

- Format of progressive evolutionary intelligence field

First Vedic Mathematics Teachers Course

1. This is one week course for School mathematics Teachers.
2. During this course school mathematics teachers are to be exposed to Vedic mathematics approach for school level mathematics operations.
3. Full scope of basic arithmetic operations, and the big range of applied values of these operations are aimed to be given exposure, (this as such is going to be the first topic to be discussed)
4. The construction of number systems on first principles as well as is to be achieved as the attainment objective of this course
5. Finally, ‘the way Ganita Sutras organization format can be availed for progressive sequential evolution of intelligence field can be assured for young minds’, is going to be the main attainment of this course being the value addition for the participants. This as such is going to be second topic of discussion.
6. This aspect of Vedic mathematics is aimed to be touched in its both pure and applied values format. With it this aspect, as such is aimed to be touch as two distinct topics, as third and fourth topics of the course.
7. Third topic as such is to give exposure to the modern mind as to how the ancient Wisdom unfolds and

organizes itself with illustrative case being of the organization format of Ganita Sutras.

8. Fourth topic is to touch the delicate aspect of intelligence field and as to most delicate aspect as to how their can be attained a progressive sequential evolution for the intelligence field within the consciousness state of human mind.
9. This way the course is aimed to be of four working days with each day devotion to one topic only is to be of three hours duration.
10. To ensure the course to be fully participating and completely interactive, the course is being restricted for five to seven participants; preferably to be for five participants.

Topic 1 Basic Arithmetic operations,

Topic 2 Number Systems,

Topic 3 Modern mind and Ancient Mind,

Topic 4 Intelligence field

40. Second Stage Exposure

Broad Outline of topics

Topic 2: Ganita Sutra 6 & 5 and Ganita Sutra 4, 3, 2, 1

Topic 1 Reach from Ganita Sutra 6 to 5 as ahead to Ganita Sutras 4 to 1

- Topic 2 Equations and Discipline of algebra
- Topic 3 Ganita Sutras 6, 5, 4
- Topic 4 Ganita Sutra 6, 5, 4 and Upsutra 4
- Topic 5 Ganita Sutras 6, 5, 4 and Upsutras 6, 5, 4
- Topic 6 Ganita Sutras 6, 5, 4, 3
- Topic 7 Ganita Sutras 6 to 3 and Upsutras 6 to 3
- Topic 8 Ganita Sutras 6, to 2 and Upsutras 6 to 2
- Topic 9 Ganita Sutras 6 to 1 and Upsutras 6 to 1

Topic 3: Ganita Sutras 5 & 6 and 7, 8, 9 and 10.

- Topic 1 Reach from Ganita Sutra 5 to 6 and ahead to Ganita Sutras 7 to 10
- Topic 2 Equations and Discipline of algebra
- Topic 3 Ganita Sutras 5, 6, 7
- Topic 4 Ganita Sutra 5, 6, 7 and Upsutra 5, 6, 7
- Topic 5 Ganita Sutras 6, 7, 8 and Upsutras 6, 7, 8
- Topic 6 Ganita Sutras 5, 6, 7, 8
- Topic 7 Ganita Sutras 5 to 8 and Upsutras 5 to 8
- Topic 8 Ganita Sutras 5 to 9 and Upsutras 5 to 9
- Topic 9 Ganita Sutras 5 to 10 and Upsutras 5 to 10

Broad Outline of topics

Topic 4: Conceptual format, features, values, virtues and order of '0'

- Topic 1 '0' as '1'
- Topic 2 '0' as '0' space
- Topic 3 $0+ 0 = 0$ x $0 = (-0) \times (-0) = (-0) = 0$

Topic 4 Symbol ‘=, equal parallel lines; ‘0’
difference / remainder

Topic 5 $1^0 = 1 = 1^{-1}$

0 space as boundary of 1-space

0 space as dimension of 2-space

0 as a point

0 as a boundary point

0 as a domain point

0 as a origin point

Static point as zero

Moving point as a moving ‘zero’.

1-space as a track of a moving point.

Zero as a place value

Zero as a numeral

Zero as identity

Zero as unmanifest

Zero as base of unmanifest

‘Zero’ as mathematical contribution of Ancient Wisdom

Second Stage Exposure

1. Vedic mathematics Teacher’s course is of a multiple stages exposure.
2. During this course the central theme has been ‘to learn and teach simultaneously’.
3. Exposure, as such is aimed to be of a progressive sequential order manifesting as different stages exposure.

4. First stage exposure has been of one week duration of four working days of three hours duration each day and one aspect as one topic to be covered and thereby the entire exposure to be of the range of four topics only.
5. The first stage exposure topics have been (i) Range of Basic (Arithmetic) operations. (ii) Construction of numbers systems as a unified system (iii) Initiation for approach to Ganita Sutras organization format and (iv) Progressive sequential Evolutionary Intelligence Field.
6. The present second stage exposure is to be about the conceptual comprehension of ‘zero’ and its values.
7. Ganita Sutras 5 and 6 are specifically centered about features of ‘Shuyanam’ (शून्यम्).

8. These Sutras read and sound as under:-

Ganita Sutra – 5

शून्यं साम्यसमुच्चये ।

(SunyamSamyasamuccaye)

If the samuccaya is the same it is Zero

Ganita Sutra – 6

(आनुरूप्ये) शून्यमन्यत् ।

(Anurupye) Sunyamanyat)

If one is in Ration the others is Zero.

9. The four specific aspects which deserve to be attended too at initial exposure to the concept of ‘Sunyam’, in the context of above placement and organization features of this pair of Sutras ‘Ganita Sutra-5 and 6’, which are being aimed to be attended to during this stage of the course are as under:-

- i. Topic 1: Text features of Ganita Sutra 5 and 6

- ii. Topic 2: Ganita Sutra 6 & 5 and Ganita Sutra 4, 3, 2, 1
- iii. Topic 3: Ganita Sutras 5 & 6 and 7, 8, 9 and 10.
- iv. Topic 4: Conceptual format, features, values, virtues and order of '0'.

Broad Outline of topics

- Topic 1: Text features of Ganita Sutra 5 and 6
- Topic 2: Ganita Sutra 6 & 5 and Ganita Sutra 4, 3, 2, 1
- Topic 3: Ganita Sutras 5 & 6 and 7, 8, 9 and 10.
- Topic 4: Conceptual format, features, values, virtues and order of '0'.

Topic 1: Text features of Ganita Sutra 5 and 6

Topic 1 Text of Ganita Sutra 5

Conceptual terms of text of Ganita Sutra – 5

- a. शून्यं ***Sunyam***
- b. साम्य ***Samya***
- c. समुच्चये ***samuccaye***
 - i. सम ***sam***
 - ii. उच्चये ***uccaye***

Conceptual terms of the text of Ganita Sutra – 6

- i. (आनुरूप्ये) (*Anurupye*)
- ii. शून्यम् *Sunyam*
- iii. अन्यत् । *anyat*

Working rule of Ganita Sutra – 5

Working rule of Ganita Sutra – 6

Mathematical domain of Ganita Sutras 5 and 6

- a. Transition from Ganita Sutra – 5 to Ganita Sutra 6
- b. Transition from Ganita Sutra – 6 to Ganita Sutra 5

41. Third Stage Exposure

रेखागणित **Rekhaganita**

1. This third stage Vedic Mathematics Teachers course would aim to focus upon Rekha Ganit.
2. Rekha Ganita is the initial phase and stage of geometry ज्योमिति
3. The preliminary distinguishing feature is the difference in focus, which in case of Rekha Ganita is upon a line, while the same in case of Geometry the center of focus being the ‘angle’, to be specific the ratios of lines.
4. The transition from Arithmetic to geometry is parallel to the transition from numbers to numbers line
5. Line as a 1-space body brings us face to face with the setting format of 1-space content, which that way makes line as a ‘domain’ of ‘length’ feature.
6. Mathematics ‘lines’ parallel to mathematics of ‘numbers’ deserves to be approached very gently
7. The best way to approach ‘line’ is as a format for manifestation of ‘domains’ / solids / cubes.

8. With it the central focus of the present stage of the course would shift to and get centered around the set up of a cube.
9. This set up as such shall be bringing us face to face with the simultaneous existence of points, intervals, squares and cubes within a cube.
10. With it quadruple entities (points, lines, surfaces, solids as such become the four topics of chase.
11. Accordingly four topics being planned to be taken up during stage of the course exposure come to be (i) Numbers line (ii) Numbers cone and conics (iii) Points, Lines, Surfaces and solids within cube and sphere $(1+2)^n$, $n = 1, 2, 3$.

42. Fourth stage exposure

1. First three stages exposure, as such may be taken as first phase of Vedic Mathematics Teachers Course.
2. With it from fourth stage exposure we shall be entering upon second phase of Vedic Mathematics Teachers Course.
3. Like first phase, the second phase as well is of three stages, which in sequence to three stages of first phase, shall be the fourth, fifth and sixth stages of exposure to Vedic Mathematics to its teachers.
4. These fourth, fifth and sixth stages of the course is to focus upon the 'spatial' order.
5. This 'spatial order focus' along artifices format is to avail 'artifice '2' as the chase format.

6. With it, artifice '2' / surface / '2-space' / square / spatial order would be under focus.
7. One may have a pause here and take note that, our first phase chase format, essentially had been the format of features of 'artifice '1' / interval / 1-space / line 'this way' the transition and progress from first phase of Vedic Mathematics Teachers Course to the present second phase of Vedic Mathematics Teachers Course is going to be from 'linear order / artifice 1 / line / 1-space / interval' to 'spatial order / artifice 2 / surface / 2-space / square'.
8. With it the fourth stage of the course, as first stage of the second phase of the course is to focus upon firstly, the transition from linear order to spatial order
9. Secondly it is going to be the transition from solids with spatial boundary to hyper solids with solid boundary.
10. Thirdly the focus would be upon 'area' as a unit.
11. Fourthly the focus aspect is going to be a transition from a three dimensional linear frame of 3-space to quadruple spatial dimensional frame of 4-space.
12. The next, second stage of this phase (being the fifth stage of the course in sequence with the first phase onwards) is to have a focus upon 4-space as a creator's space.
13. 4-space as creator's space deserves to be chased for its prominent virtues as (i) four fold manifestation format (ii) Measuring rods (iii) Dimensional synthesis mathematics and (iv) Lord Brahma, four head lord,

creator the supreme being the presiding deity of 4-space.

14. The final, namely third stage of this phase which in the sequence with the first phase, would be the sixth stage of the course, is to focus upon the functioning simultaneously with '2 as 1' and '1 as 2' as the working units being simultaneously available.
15. The prominent aspects of this phase and stage, going to be covered during this phase and stage are
 - (i) 'Half Unit'
 - (ii) 'Continuity and Differentiability' need to be revisited
 - (iii) Solid origin
 - (iv) Transcendence at solid origin to its base
16. With it the topics for stages of exposure of this phase may be enumerated as under:

	Phase 2	Stage 1
Topic 1	Transition from linear order	to Spatial order
Topic 2	Transition from spatial boundary	to solid boundary
Topic 3	'Area' as a unit	
Topic 4	Transition from three linear dimensions frame to four spatial dimensions frame	

	Phase 2	Stage 2
Topic 1	transition from linear order	to spatial order
Topic 2	transition from solids with spatial boundary to hyper solids with solid boundary	

Topic 3 'area' as a unit
 Topic 4 transition from a three dimensional linear frame
 of 3-space to quadruple spatial dimensional
 frame of 4-space
 Phase 2 Stage 3
 Topic 1 four fold manifestation format
 Topic 2 Measuring rods
 Topic 3 Dimensional synthesis mathematics
 Topic 4 Lord Brahma, four head lord, creator
 the supreme

Phase 3 Stage 4
 Topic 1 'Half Unit'
 Topic 2 'Continuity and Differentiability'
 need to be revisited
 Topic 3 Solid origin
 Topic 4 Transcendence at solid origin to its
 base

First phase Linear order Mathematics
Second phase spatial order mathematics
Third phase solid order mathematics
Fourth phase hyper solid order mathematics

=====
First phase Linear Mathematics
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Stage – 1 Arithmetic
 Topic 1 Basic Arithmetic operations,

Topic 2 Number Systems,
 Topic 3 Modern mind and Ancient Mind,
 Topic 4 Intelligence field

Stage – 2 ‘?Sunyam’

Topic 5: Text features of Ganita Sutra 5 and 6

Topic 6: Ganita Sutra 6 & 5 and Ganita Sutra 4,
 3, 2, 1

Topic 7: Ganita Sutras 5 & 6 and 7, 8, 9 and 10.

Topic 8: Conceptual format, features, values, virtues and order of ‘0’.

Stage – 3 Geometry

Topic 9 Numbers line

Topic 10 Numbers cone and conics

Topic 11 Points, Lines, Surfaces and
 solids within cube and sphere

Topic 12 $(A+2)^n$, $n = 1, 2, 3$

Second phase Spatial order Mathematics

Stage – 4 Transition from 3-space to 4-space

Topic 13 Transition from linear order to Spatial
 order

Topic 14 Transition from spatial boundary to
 solid boundary

Topic 15 ‘Area’ as a unit

Topic 16 Transition from three linear dimensions frame to four spatial dimensions frame

Stage – 5 Transitions from solids to hyper solids

Topic 17 transition from linear order to spatial order

Topic 18 transition from solids with spatial boundary to hyper solids with solid boundary

Topic 19 ‘area’ as a unit

Topic 20 transition from a three dimensional linear frame of 3-space to quadruple spatial dimensional frame of 4-space

Stage – 6 Four space mathematics

Topic 21 four fold manifestation format

Topic 22 Measuring rods

Topic 23 Dimensional synthesis mathematics

Topic 24 Lord Brahma, four head lord, creator the supreme

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Third phase Solid order Mathematics
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Third phase

Stage – 7

Topic 25, Topic 26, Topic 27, Topic 28

Stage – 8

Topic 29, Topic 30, Topic 31, Topic 32

Stage – 9

Topic 33, Topic 34, Topic 35, Topic 36

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Fourth phase Hyper Solid order Mathematics
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Fourth phase

Stage – 10

Topic 37, Topic 38, Topic 39, Topic 40

Stage – 11

Topic 41, Topic 42, Topic 43, Topic 44

Stage – 12

Topic 45, Topic 46, Topic 47, Topic 48

43. Fifth stage exposure

1. Vedic Mathematics Teaching Training has not yet set itself on proper institutionalized format. The present Vedic Mathematics teachers course is an initiative for approaching the Discipline of Vedic Mathematics as per the demands of the values of the Discipline.

2. The conceptual foundations of the Discipline of Vedic Mathematics being of its distinctive approach to the values of Mathematics, as such, to be true to the Discipline, its teaching naturally is to be as per its first principles base as it is my following the same only the end values of the Discipline can be expected to be attained. Accepting this as the as the central truth and aiming to approach.
3. Vedic Mathematics as a main stream Discipline of instructions for young minds. This 12 weeks course is being designed for school mathematics teachers desiring to learn and teach Vedic Mathematics. The course, as such, is to be taken as the course aiming to give intensive exposure of the conceptual approach of Vedic mathematics.
4. The course is being organized as of four phases with each phase being of three stages.
5. The Sequential focus of four phases being as upon 'linear, spatial, solid and hyper solid' order approach and reach at the values and operations of mathematics. These quadruple phases of instructions may be taken as meant for young minds of 9th, 10th, 11th and 12th standard of schooling of present times
6. First phase course focus is upon the learning of the Teaching features of linear order mathematics values.
7. During this phase the focused attention is centered upon the format of a line for artifices of numbers.
8. During second phase the focus would shift from that of line format to that of surface format. This being so, the

transition from the format and features of line to that of surface, as such shall be of basic attention.

9. This shall be leading us from '1' to '2' / 'line' to 'surface' / 'interval' to 'square' / line as 'axis' to surface as 'axes'.
10. During third phase transition would be from spatial order format to that of solid order format. Here shift would be from artifice '2' to artifice '3' / square to cube / circle to sphere / spatial axis to solid axis.
11. During fourth phase shift would be from artifice 3 to artifice 4 parallel to it, would be a shift from solid axis to hyper solid axes.
12. The exposure of linear order to young mind having already covered middle school level mathematics is to be very simple, as well as the same is to be of highly ordered format. This being so, naturally a very heavy responsibility would lie upon Vedic Mathematics Teachers to teach in a very gentle steps
13. Young mind having an exposure to ordered format of line, is now to be exposed to differently ordered format of the surface. As the need would be to have a smooth transition from the ordered format of a line to differently ordered format of a surface, as such heavy responsibility would fall upon the head of Vedic Mathematics teachers to achieve this for the young mind in a very gentle and a smooth way through delicately arranged small steps of procedures for this attainment ensuring that this does not cause a scrtch upon the innocence of young minds and also this rules

out manifesting mental block are unmathematical knots.

14. Next phase of solid order mathematics shall be expecting a transition from spatial order set ups to solid order set ups.
15. Here the responsibility of Vedic Mathematics Teachers is going to be of more intensity as the solid order is very differently ordered than that of spatial order.
16. A step ahead, the transition from solid order to hyper solid order is going to be of heaviest responsibilities for the Vedic Mathematics Teachers because of the very affine features of 4-space vis-à-vis 3-space
17. For comprehension facility, the geometric formats of interval, square, cube and hyper cube shall be of great help to stabilize vision of values of linear, spatial, solid and hyper solid orders.
18. Likewise quadruple artifices (1, 2, 3, 4) shall be index values of linear and spatial, solid and hyper solid orders

44. Initial Outline of Text Topics for Class IX

Chapter 1: Introduction

- 1.1 Teacher-disciple joint prayer
(Kathoupanishad prayer)
- 1.2 Mathematical approach (Yoga
Churamaniupanisahd-71)
- 1.3 Mathematics of one

- 1.4 Shad Chakra format
- 1.5 Vedic mathematics
- 1.6 Macro World and Micro world
- 1.7 Macro (physical) world basis of syllabus of class DC
- 1.8 Macro (Atomic) world basis of syllabus of class X
- 1.9 Nuclear world basis of syllabus of class XI
- 1.10 Supreme order basis of syllabus of class XII.

Chapter 2 : Macro (physical) world basis

- 2.1 Physical world
- 2.2 Macro world versus micro world
- 2.3 Three space format
- 2.4 Linear dimensional order
- 2.5 One space in the role of dimension
- 2.6 Two space in the role of boundary
- 2.7 Three space in the role of domain
- 2.8 Four space in the role of origin.
- 2.9 Three manifestation layer
- 2.10 Five space format for transcendence.

Chapter 3 : Three space and three space bodies

- 3.1 Three space
- 3.2 Three space content
- 3.3 Three space as domain
- 3.4 Three space bodies
- 3.5 Mathematics of three space

- 3.6 Endean geometry
- 3.7 Theory of equations
- 3.8 Solid bodies
- 3.9 Motion of bodies
- 3.10 Limits of three space mathematics.

Chapter 4: Ganita Sutras (Mathematics of the linear order)

- 4.1 Ganita Sutras
- 4.2 Ganita Sutra-I
- 4.3 Ganita Sutra-XIV
- 4.4 Mathematics of linear order
- 4.5 Ganita Sutra-II
- 4.6 Ten place value system
- 4.7 Ganita Sutra-II
- 4.8 Multiplication operation
- 4.9 Ganita Sutra-IV
- 4.10 Reflection operation.

Chapter 5 : Properties of the cube

- 5.1 Cube
- 5.2 Three dimensional fixation of cube
- 5.3 Four versions of cube
- 5.4 Five latent edges of cube
- 5.5 Six surfaces of cube
- 5.6 Seven versions of cube
- 5.7 Eight octant cut of the cube
- 5.8 Nine points fixation of cube
- 5.9 Ten directions of fixations of cubes

5.10 Center of cube.

Chapter 6 : Properties of the sphere

6.1 Sphere

6.2 Three dimensional fixation of sphere

6.3 Surfaces area of sphere

6.4 Volume of sphere

6.5 Polar coordinates

6.6 Solid angles

6.7 Circle and sphere

6.8 Plane geometry

6.9 Circular trigonometry

6.10 Spherical trigonometry.

Chapter 7 : Motions

7.1 Motion

7.2 Speed

7.3 Velocity

7.4 Acceleration

7.5 Motion on a line

7.6 Motion in a plane

7.7 Motion in three space

7.8 Concept of time

7.9 Time as fourth dimension

7.10 Time and geometric dimensions.

Chapter 8 : Curves and graphs

8.1 Track of moving point in one space

8.2 Track of moving point in two space

- 8.3 Track of moving point in three space
- 8.4 Different versions of intervals
- 8.5 Plane curves
- 8.6 Families of the plano curve
- 8.7 Three space curve
- 8.8 Trajectory
- 8.9 Graphs
- 8.10 Statistical graphs.

Chapter 9 : Solid bodies

- 9.1 Cube
- 9.2 Sphere
- 9.3 Cylinder
- 9.4 Cone
- 9.5 Tetrahedron
- 9.6 Egg
- 9.7 Tree
- 9.8 Bird
- 9.9 Animal
- 9.10 Man.

Chapter 10 : Structured points

- 10.1 Point of one space
- 10.2 Set theory
- 10.3 Point of plane
- 10.4 Cartesian geometry
- 10.5 Point of three space
- 10.6 Interval as collection of points
- 10.7 Plane as collection of lines and points

- 10.8 Solid bodies as collection of planes
- 10.9 Points of lines have length
- 10.10 Points of plane have area.

45. Initial Outline Of Text Topics For Class X

Chapter 1 : Revision of class IX

- 1.1 Introduction
- 1.2 Macro (physical) world basis of syllabus of class IX
- 1.3 Three space and three space bodies
- 1.4 Ganita Sutras
- 1.5 Properties of cube
- 1.6 Properties of sphere
- 1.7 Motions
- 1.8 Curves and graphs
- 1.9 Solid bodies
- 1.10 Structured points.

Chapter 2 : Micro (atomic) world basis of syllabus of class X

- 2.1 Micro world
- 2.2 Micro world versus nuclear world
- 2.3 Four space format

- 2.4 Spatial dimensional order
- 2.5 Two space in the role of dimension
- 2.6 Three space in the role of boundary
- 2.7 Four space in the role of domain
- 2.8 Five space in the role of origin.
- 2.9 Four manifestation layer
- 2.10 Five space format for transcendence.

Chapter 3 : Four space and four space bodies

- 3.1 Four space
- 3.2 Four space content
- 3.3 Four space as domain
- 3.4 Four space bodies
- 3.5 Mathematics of four space
- 3.6 Affine geometry
- 3.7 Theory of equations
- 3.8 Hypersolids-4 bodies
- 3.9 Motion of bodies
- 3.10 Limits of four space mathematics.

Chapter 4 : Ganita Sutras

- 4.1 Ganita Sutras
- 4.2 Ganita Sutra-IV
- 4.3 Ganita Sutra-V
- 4.4 Ganita Sutra-VI
- 4.5 Ganita Sutra-VII
- 4.6 Ganita Upsutra-I

- 4.7 Ganita Upsutra-II
- 4.8 Ganita Upsutra-III
- 4.9 Ganita Upsutra-IV
- 4.10 Ganita Upsutra-V.

Chapter 5 : Properties of the hypercube-4

- 5.1 Hypercube-4
- 5.2 Four dimensional fixation of hypercube-4
- 5.3 Five versions of hypercube-4
- 5.4 Nine versions of hypercube-4
- 5.5 Expression as A8
- 5.6 Eight place value system
- 5.7 Hypercube-4 in the role of dimension
- 5.8 Hypercube-4 in the role of boundary
- 5.9 Hypercube-4 in the role of domain
- 5.10 Center of hpercube-4.

Chapter 6 : Properties of the hypersphere-4

- 6.1 Hypersphere-4
- 6.2 Four dimensional fixation of hypersphere-4
- 6.3 Five versions of hypersphere-4
- 6.4 Nine versions of hypersphere-4
- 6.5 Expression as A8
- 6.6 Eight place value system
- 6.7 Hypersphere-4 in the role of dimension
- 6.8 Hypersphere-4 in the role of boundary
- 6.9 Hypersphere-4 in the role of domain

6.10 Centre of hypersphere-4.

Chapter 7 : Motions in four space

- 7.1 Track of moving point in four space
- 7.2 Track of moving line in four space
- 7.3 Track of moving plane in four space.
- 7.4 Track of moving plane in four space.
- 7.5 Track of moving hypersolid in four space
- 7.6 Static hypersolid-4
- 7.7 Dynamic hypersolid 4 as hypersolid-5
- 7.8 Concept of time
- 7.9 Time as fifth dimension
- 7.10 Time and geometric dimensions.

Chapter 8 : Curves and graphs

- 8.1 Four space curves
- 8.2 Four space surfaces
- 8.3 Four space solids
- 8.4 Four space hypersolids
- 8.5 Four space format
- 8.6 Graphs of four space
- 8.7 Atomic world on four space format
- 8.8 Organic chemistry of four space format
- 8.9 Biological world of four space format
- 8.10 Astronomical world of four space format.

Chapter 9 : Hypersolid bodies

- 9.1 Hypercube-4
- 9.2 Thirteen as edged cube
- 9.3 Hypersphere-4
- 9.4 Dynamic cube as hypercube-4
- 9.5 Dynamic sphere as hypersphere-4
- 9.6 Egg
- 9.7 Tree
- 9.8 Bird
- 9.9 Animal
- 9.10 Man.

Chapter 10 : Synthetic monads

- 10.1 Synthetic monads
- 10.2 Di-monad
- 10.3 Tri-monad
- 10.4 Tetramonad
- 10.5 Di-monads as dimensional frame of two space
- 10.6 Di-monad as dimensional order of four space
- 10.7 Tri-monad as dimensional space of three space
- 10.8 Trimonad as dimensional space e of order-5
- 10.9 Tetramonad as dimensional space of four space
- 10.10 Tetra monads as dimensional order of six space.

46. Initial Outline Of Text Topics For Class Xi

Chapter 1 : Revision of class X

- 1.1 Revision of class IX
- 1.2 Micro (atomic) world basis of syllabus class X
- 1.3 Four space and four space bodies
- 1.4 Ganita Sutras
- 1.5 Properties of hypercube-4
- 1.6 Properties of hypersphere-4
- 1.7 Mims in four space
- 1.8 Curves and graphs
- 1.9 Hypersolid bodies
- 1.10 Synthetic monads.

Chapter 2 : Nuclear world basis

- 2.1 Nuclear world
- 2.2 Nuclear world versus supreme order
- 2.3 Five space format
- 2.4 Solid dimensional order
- 2.5 Three space in the role of dimension
- 2.6 Four space in the role of boundary
- 2.7 Five space in the role of domain
- 2.8 Six space in the role of origin.
- 2.9 Five manifestation layer
- 2.10 Five space format for transcendence.

Chapter 3 : Five space and five space bodies

- 3.1 Five space
- 3.2 Five space content
- 3.3 Five space as domain
- 3.4 Five space bodies
- 3.5 Mathematics of five space
- 3.6 Affine geometry
- 3.7 Theory of equations
- 3.8 Hypersolids-5 bodies
- 3.9 Motion of bodies
- 3.10 Limits of five space mathematics.

Chapter 4 : Ganita Sutras

- 4.1 Ganita Sutras
- 4.2 Ganita Sutra-VIII
- 4.3 Ganita Sutra-IX
- 4.4 Ganita Sutra X
- 4.5 Ganita Sutra-XI
- 4.6 Ganita Up sutra VI
- 4.7 Ganita Upsutra VII
- 4.8 Ganita Upsutra VIII
- 4.9 Ganita Upsulm IX
- 4.10 Ganita Upsutra X.

Chapter 5 : Properties of the hypercube-5

- 5.1 Hypercube-5

- 5.2 Five dimensional fixation of hypercube-5
- 5.3 Six versions of hypercube-5
- 5.4 Eleven versions of hypercube
- 5.5 Expression as A15
- 5.6 Transcendence at the boundary of hypercube-5
- 5.7 Hypercube-5 in the role of dimension
- 5.8 Hypercube-5 in the role of boundary
- 5.9 Hypercube-5 in the role of domain
- 5.10 Center of hypercube-5.

Chapter 6 : Properties of the hypersphere-5

- 6.1 Hypersphere-5
- 6.2 Five dimensional fixation of hypercube 5
- 6.3 Six versions of hypersphere-5
- 6.4 Eleven versions of hypersphere-5
- 6.5 Expression as A15
- 6.6 Ten place value system
- 6.7 Hypersphere-5 in the role of dimension
- 6.8 Hypersphere-5 in the role of boundary
- 6.9 Hypersphere-5 in the role of domain
- 6.10 Centre of hypersphere-5.

Chapter 7 : Motions in five space

- 7.1 Track of moving point in five space
- 7.2 Track of moving line in live space
- 7.3 Track of moving plane in five space.

- 7.4 Track of moving plane in five space
- 7.5 Track of moving hypersolid in five space
- 7.6 Static hypersolid-5
- 7.7 Dynamic hypersolid-5
- 7.8 Concept of time
- 7.9 Time as sixth dimension
- 7.10 Time and geometrical dimensions.

Chapter 8 : Curves and graphs

- 8.1 Five space curves
- 8.2 Five space surfaces
- 8.3 Five space solids
- 8.4 Five space hypersolids
- 8.5 Five space format
- 8.6 Graphs of live space format
- 8.7 Nuclear world on five space format
- 8.8 Organic chemistry of five space format
- 8.9 Biological world of five space format
- 8.10 Astronomical world of five space format.

Chapter 9 : Hypersolid bodies

- 9.1 Hypercube-5
- 9.2 Seventeen edged cube
- 9.3 Hypersphere
- 9.4 Dynamic hypercube-4
- 9.5 Dynamic hypersphere-4
- 9.6 Egg

- 9.7 Fire
- 9.8 Bird
- 9.9 Animal
- 9.10 Man.

Chapter 10 : Generation status of elements

- 10.1 Generation status of elements
- 10.2 Zero space status of elements
- 10.3 One space of elements as members of set
- 10.4 Two e status of elements as members of set with binary operations
- 10.5 Three space status of operated elements as set with binary operations
- 10.6 Set with binary operations admits N^3 constants.
- 10.7 Set with binary operations work out zero space in the role of dimension
- 10.8 Euclidean geometry works out one space in the role of dimension
- 10.9 Vedic Geometry works out $(n - 2)$ spat- in the role of dimension of n-space
- 10.10 Five space format is the transcendence format.

47. Initial Outline Of Text Topics For Class Xii

Chapter 1 : Revision of class XI

- 1.1 Revision of class X
- 1.2 Nuclear world basis of syllabus class XI
- 1.3 Five space and five space bodies
- 1.4 Ganita Suit
- 1.5 Properties of hypercube-5
- 1.6 Properties of hyper sphere-5
- 1.7 Motions in five space
- 1.8 Curves and graphs
- 1.9 Hypersolid bo "
- 1.10 Generation status of elements.

Chapter 2 : Supreme order basis

- 2.1 Nuclear order of six space
- 2.2 Self regulating process supreme order
- 2.3 Six space format
- 2.4 Hypersolid dimenison order
- 2.5 Four space in the role of dimension
- 2.6 Five space in of role of boundary
- 2.7 Six space in the role of domain
- 2.8 5 space in the role of origin.
- 2.9 Six manifestation layer
- 2.10 Space format for self-regulation of transcendence.

Chapter 3 : Six space and six space bodies

- 3.1 Six space
- 3.2 Six space content
- 3.3 Six space as domain
- 3.4 Six space bodies
- 3.5 Mathematics of six space
- 3.6 Affine geometry
- 3.7 Theory of equations
- 3.8 Hypersolids-6 bodies
- 3.9 Motion of bodies
- 3.10 Limits of six space mathematics.

Chapter 4 : Ganita Sutras

- 4.1 Ganita Sutras
- 4.2 Ganita Sutra-XII
- 4.3 Ganita Sutra-XIII
- 4.4 Ganita Sutra-XV
- 4.5 Ganita Sutra-XVI
- 4.6 Ganita Upsutra-XI
- 4.7 Ganita Upsutra-XII
- 4.8 Ganita Upsutra-XIII
- 4.9 Multidimensional of Ganita Sutras-IX
- 4.10 Organisation of Ganita Sutras text.

Chapter 5 : Properties of the hypercube-6

- 5.1 Hypercube-6
- 5.2 Six dimensional fixation of hypercube-6
- 5.3 Seven versions of hypercube-6

- 5.4 Thirteen versions of hypercube- 6
- 5.5 Expression as A48
- 5.6 Transcendence at the boundary of hypercube-6
- 5.7 Hypercube-6 in the role of dimension
- 5.8 Hypercube-6 in the role of boundary
- 5.9 Hypercube-6 in the role of domain 5.10
- Center of hpercube-6.

Chapter 6 : Properties of the hypersphere-6

- 6.1 Hypersphere-6
- 6.2 Six dimensional fixation of hypersphere
- 6.3 Seven versions of hypersphere-6
- 6.4 Thirteen versions of hypersphere-6
- 6.5 Expression as A48
- 6.6 Twelve place value system
- 6.7 Hypersphere-6 in the role of dimension
- 6.8 Hypersphere-6 in the role of boundary
- 6.9 Hypersphere-6 in the role of domain
- 6.10 Center of hypersphere-6.

Chapter 7 : Motions in six space

- 7.1 Back of moving point in six space
- 7.2 Track of moving line in six space
- 7.3 Track of moving plane in six space.
- 7.4 Track of moving solid in five space
- 7.5 Track of moving hypersolid-6 in six space

- 7.6 Static hypersolid-6
- 7.7 Dynamic hypersolid-6
- 7.8 Concept of time
- 7.9 Time as sixth dimension
- 7.10 Time and geometrical dimensions.

Chapter 8 : Curves and graphs

- 8.1 Six space curves
- 8.2 Six space surfaces
- 8.3 Six space solids
- 8.4 Six space hypersolids-4, 5 & 6
- 8.5 Six space format
- 8.6 Graphs of six space format
- 8.7 Supreme order of six space format
- 8.8 Organic chemistry of six space format
- 8.9 Biological world of six space format
- 8.10 Astronomical world of six space format

Chapter 9 : Hypersolid bodies

- 9.1 Hypercube-6
- 9.2 Twenty-edged cube
- 9.3 Hypersphere-6
- 9.4 Dynamic hypercube-5 as hypercube-6
- 9.5 Dynamic hypersphere 5 as hypersphere-6
- 9.6 Egg
- 9.7 Tree
- 9.8 Bird

9.9 Animal

9.10 Man.

Chapter 10 : Supreme order

10.1 Supreme order

10.2 Shad Chakra format

10.3 Sun

10.4 Measuring-rod

10.5 Trinity of Gods

10.6 Saptrishilok

10.7 Bindu Sarowar

10.8 Transcendence at the origin of Bindu
Sarownr

10.9 Transcendental meditation

10.10 Transcendental states.

48. School level Mathematics learning

Broadly School Mathematics learning can be topically grouped as under:

Topic 1 Numbers System

This is the basic topic. Learning of number system is at the core of School level learning of mathematics starting with

counting number and having a reach uptill complex numbers is the broad range of learning under this topic of 'Numbers system'.

Essentially the focus is to remain upon Arithmetic operations (addition, subtraction, multiplication and Division. With the use of these operations, values of square and square roots, cube and cube roots are worked out as 'Arithmetic' / 'As a definitive branch of mathematics

Topic 2 Algebraic equations

The second topic of importance of learning of School level mathematics may be captioned as 'Algebraic equations', starting with linear equations and reach uptill the bi-quadratic is going to be the range of learning under this topic.

Topic 3 Trigonometry

Third topic of focus during learning of School Mathematics may be captioned as 'Trigonometry'. Trigonometric equation and their application remain at the center under this topic sine, cos and tan formulations as well as their reverse formulations remain at the center of learning.

Topic 4 Geometry

The pre-dominant classical approach to geometry as of physical forms and measures is accepted as ‘Euclid’s geometry’. Here the focus is to be upon construction and measuring units of length, surface and volumes. Also here the focus would be upon the concept of an Angle and close surface curves like polygons.

Conic sections is one distinct class of geometric bodies and as such their chase as a class has great advantages of learning, the values of geometry.

Single, double and triple coordinates fixation of a point of the space and equations for geometric bodies like ‘line, square, cube, surface, circle, sphere, cylinder’ and the like remain at the center of learning of mathematics under this topic. These features and approach earn a distinct name as ‘coordinate geometry’ of the Discipline of geometry as a branch of mathematics.

Topic 4 Calculus

Differential and integral calculus and differential equations in their simplest form are covered under this topic.

Topic 5 Statistics

Conceptual format and its working on first principles of ‘statistics’ are introduced and exposed for applied values of

mathematics as an independent branch of mathematics designated as 'statistics'.

'Probability and Samples' are the two basic concept upon whose comprehension the understanding of the pure and applied values of 'statistics' depend most at this initial level of learning.

Permutations and Combinations is one another concept of wide applications.

Topic 6 Mathematical logic and reasoning

Human mind unfolds itself as intelligence field which leads to the approach of 'reasoning' and in terms thereof we are having mathematical values and results. Because of it, we accept as that mathematics is the Discipline of logic and reasoning. This logic and reasoning, in itself has taken the central place in the Discipline of mathematics. Further because of it the acceptable approach being designated as mathematical approach is getting acceptance as the approach of Axioms, postulate. In terms of prior accepted Axioms and Postulates, the set of entitles are structured as mathematical organizations and systems.

This approach to mathematics is designated as the set theoretic approach in terms of the accepted axioms and postulates. The fresh approach to classical mathematical properties and results as of set theoretic formats has helped to

reach at the construction of mathematical models for generalization and abstractions.

Topic 7 Historic and classical evolutionary approach to the growth of different mathematical branches

For proper mathematical maturity it would be of immense values that one shall also have historic and conceptual evolutionary chase of focus upon different values and results of mathematics. It in a way, also may be viewed as a chase of intellectual history of mankind.

Number System

1. '1'
2. Natural numbers
3. Integers
4. Rational
5. Real Numbers
6. Complex numbers
7. '1, 2, 3, 4, 5, 6, 7, 8, 9'
8. '01, 02, 03, 04, 05, 06, 07, 08, 09'
9. '01, 02, 03, 04, 05, 06, 07, 08, 09'
10, 11, 12, ---

- 10.001, 002, 003, 004, 005, 006, 007, 008, 009
010, 011, 012, 013, 014, 015, 016, 017, 018

- 11.Ten place value system

12. Primes (2, 3, 5, 7, 11, ----)
13. Perfect numbers (6, 28, 496, 8128, 33350, 336, ----)
14. Sporadic groups (S1 to S26)
15. 18 infinite series groups (isg-1 to 18)

Geometric bodies

1. Point Static point / dynamic point / structured point
2. Interval 1-space body / line / Track of a moving point
3. Square 2-space body / surface / track of a moving line
4. Cube 3-space body / solid / track of a moving surface
5. Hyper cube 4 4-space body / hyper solid -4 / track of a moving solid
6. Hyper cube 5 / 5-space body / hyper solid -5 / track of a moving hyper solid 4
7. Hyper cube 6 / 6-space body / hyper solid -6 / track of a moving hyper solid 5
8. Hyper cube 7 / 7-space body / hyper solid -7 / track of a moving hyper solid 6

Different branches of mathematics

1. Arithmetic Number theory / Natural Numbers / Integers rationales / Real numbers / Complex numbers
2. Algebra Theory of equations / set theory / algebraic structure
3. Geometry Cartesian geometry / coordinate geometry / pure geometry / solid geometry

4. Statistics probability / permutation combination, data analysis
5. Calculus Measure theory / Differential calculus / Integral calculus
6. Topology open sets ($2n + 1$ th) geometry / open interval, open square Open circle / open sphere / open hyper sphere
7. Carriers Rector analysis, tensor analysis, metal carriers.
8. Manifestation Creator's space,
9. Transcendence / Transcendental domains

Class VI Class VII Class VIII

CLASS-WISE COURSE STRUCTURE IN MATHEMATICS AT UPPER PRIMARY LEVEL

1. NUMBER SYSTEM (60 hrs)

(i) *Knowing our Numbers:*

Consolidating the *sense* of numberness up to 5 digits, Size, estimation of numbers, identifying smaller, larger, etc. Place value (recapitulation and extension), connectives: use of symbols =, <, > and use of brackets, word problems on number operations involving large numbers up to a maximum of 5 digits in the answer after alloperations. This would include conversions of units of length & mass (from the larger to the smaller units), estimation of outcome of number operations. Introduction to a sense of the largeness of, and initial familiarity with, large numbers up to 8 digits and approximation of large numbers)

(ii) *Playing with Numbers:*

Simplification of brackets, Multiples and factors, divisibility rule of 2, 3, 4, 5, 6, 8, 9, 10, 11.

(All these through observing patterns. Children would be helped in deducing some and then asked to derive some that are a combination of the basic patterns of divisibility.)

Even/odd and prime/composite numbers,

Co-prime numbers, prime

1. Number System (50 hrs)

(i) *Knowing our Numbers: Integers*

- Multiplication and division of integers (through patterns). Division by zero is meaningless
- Properties of integers (including identities for addition & multiplication, *commutative, associative, distributive*) (through patterns). These would include examples from whole numbers as well. Involve expressing commutative and associative properties in a general *form*. Construction of counterexamples, including some by children. Counter examples like subtraction is not commutative.
- Word problems including integers (all operations)

(ii) *Fractions and rational numbers:*

- Multiplication of fractions
- Fraction as an operator
- Reciprocal of a fraction
- Division of fractions

- Word problems involving mixed fractions
- Introduction to rational numbers (with representation on number line)
- Operations on rational numbers (all operations)

Class - 8

1. Number System (50 hrs)

(i) Rational Numbers:

- Properties of rational numbers.(including identities). Using general form of expression to describe properties
- Consolidation of operations on rational numbers.
- Representation of rational numbers on the number line
- Between any two rational numbers there lies another rational number (Making children see that if we take two rational numbers then unlike for whole numbers, in this case you can keep finding more and more numbers that lie between them.)
- Word problem (higher logic, two operations, including ideas like area)

(ii) Powers

- Integers as exponents.
- Laws of exponents with integral powers

(iii) Squares, Square roots, Cubes, Cube roots.

- Square and Square roots
- Square roots using factor method and division method for numbers containing (a) no more than total 4 digits and (b) no more than 2 decimal places

factorisation, every number can be written as products of prime factors. HCF and LCM, prime factorization and division method for HCF and LCM, the property $\text{LCM} \times \text{HCF} = \text{product of two numbers}$. All this is to be embedded in contexts that bring out the significance and provide motivation to the child for learning these ideas.

(iii) Whole numbers

Natural numbers, whole numbers, properties of numbers (commutative, associative, distributive, additive identity, multiplicative identity), number line. Seeing patterns, identifying and formulating rules to be done by children. (*As familiarity with algebra grows, the child can express the generic pattern.*)

(iv) Negative Numbers and Integers

How negative numbers arise, models of negative numbers, connection to daily life, ordering of negative numbers, representation of negative numbers on number line. *Children to see patterns, identify and formulate rules.* What are integers, identification of integers on the number line, operation of addition and subtraction of integers, showing the operations on the number line (addition of negative integer reduces the value of the number) comparison of integers, ordering of integers.

- Representation of rational number as a decimal.
- Word problems on rational numbers (all operations)
- Multiplication and division of decimal fractions
- Conversion of units (length & mass)

- Word problems (including all operations)

(iii) Powers:

- Exponents only natural numbers.
- Laws of exponents (through observing patterns to arrive at generalisation.)
- Cubes and cubes roots (only factor method for numbers containing at most 3 digits)
- Estimating square roots and cube roots. Learning the process of moving nearer to the required number.

(iv) Playing with numbers

- Writing and understanding a 2 and 3 digit number *in generalized form* ($100a + 10b + c$, where a, b, c can be only digit 0-9) and engaging with various puzzles concerning this. (Like finding the missing numerals represented by alphabets in sums involving any of the four operations.) Children to solve and create problems and puzzles.
- Number puzzles and games
- Deducing the divisibility test rules of 2, 3, 5, 9, 10 for a two or three-digit number expressed in the general form.

Class VI Class VII Class VIII

(v) Fractions:

Revision of what a fraction *is*, Fraction as a part of whole, Representation of fractions (pictorially and on number line), fraction as a division, proper, improper & mixed fractions, equivalent fractions, comparison of fractions, addition and

subtraction of fractions (Avoid large and complicated unnecessary tasks).

(Moving towards abstraction in fractions)

Review of the idea of a decimal *fraction*, place value in the context of decimal *fraction*, inter conversion of fractions and decimal fractions (avoid recurring decimals at this stage), word problems involving addition and subtraction of decimals (two operations together on money, mass, length and temperature)

2. Algebra (15 hrs)

Introduction To Algebra

- Introduction to variable through patterns and through appropriate word problems and generalizations (example $5 \times 1 = 5$ etc.)
- Generate such patterns with more examples.
- Introduction to unknowns through examples with simple contexts (single operations)

Algebra (20 hrs)

Algebraic Expressions

- Generate algebraic expressions (simple) involving one or two variables
- Identifying constants, coefficient, powers
- Like and unlike terms, degree of expressions e.g., $x^2 y$ etc. (exponent ≤ 3 , number of variables)
- Addition, subtraction of algebraic

Algebra (20 hrs)**(i) Algebraic Expressions**

- Multiplication and division of algebraic exp. (Coefficient should be integers)
 - Some common errors (e.g. $2 + x \neq 2x$, $7x + y \neq 7xy$)
 - Identities $(a \pm b)^2 = a^2 \pm 2ab + b^2$, $a^2 - b^2 = (a - b)(a + b)$
- Factorisation (simple cases only) as examples the following types
- $a(x + y)$, $(x \pm y)^2$, $a^2 - b^2$, $(x + a)(x + b)$

Class VI Class VII Class VIII

Ratio and Proportion (15 hrs)

- Concept of Ratio
- Proportion as equality of two ratios
- Unitary method (with only direct variation implied)
- Word problems

Geometry (65 hrs)**(i) Basic geometrical ideas (2 -D):**

Introduction to geometry. Its linkage with and reflection in everyday experience.

- Line, line segment, ray.
- Open and closed figures.
- Interior and exterior of *closed* figures. expressions (coefficients should be integers).
- Simple linear equations in one variable (in contextual problems) with two operations (avoid complicated coefficients)

Ratio and Proportion (20 hrs)

- Ratio and proportion (revision)
- Unitary method continued, consolidation, general expression.
- Percentage- an introduction.
- Understanding percentage as a fraction with denominator 100
- Converting fractions and decimals into percentage and vice-versa.
- Application to profit and loss (single transaction only)
- Application to simple interest (time period in complete years).

Geometry (60 hrs)

(i) Understanding shapes:

- Pairs of angles (linear, supplementary, complementary, adjacent, vertically opposite)
(verification and simple proof of vertically opposite angles)
- Properties of parallel lines with transversal (alternate,
- Solving linear equations in one variable in contextual problems involving multiplication and division (word problems) (avoid complex coefficient in the equations)

Ratio and Proportion (25 hrs)

- Slightly advanced problems involving applications on percentages, profit & loss, overhead expenses, Discount, tax.
- Difference between simple and compound interest (compounded yearly up to 3 years or half-yearly up to 3 steps)

only), Arriving at the formula for compound interest through patterns and using it for simple problems.

- Direct variation – Simple and direct word problems
- Inverse variation – Simple and direct word problems
- Time & work problems– Simple and direct word problems

Geometry (40 hrs)

(i) Understanding shapes:

- Properties of quadrilaterals –
Sum of angles of a quadrilateral is equal to 3600 (By verification)
- Properties of parallelogram (By verification)
- (i) Opposite sides of a parallelogram are equal,

Class VI Class VII Class VIII

- Curvilinear and linear *boundaries*
- Angle — Vertex, arm, interior and exterior,
- Triangle — vertices, sides, angles, interior and exterior, altitude and median
- Quadrilateral — Sides, vertices, angles, diagonals, adjacent sides and opposite sides (only convex quadrilateral are to be discussed), interior and exterior of a quadrilateral.
- Circle — Centre, radius, diameter, arc, sector, chord, segment, semicircle, circumference, interior and exterior.

(ii) Understanding Elementary Shapes (2-D and 3-D):

- Measure of Line segment
- Measure of angles
- Pair of lines

- Intersecting and perpendicular lines
- Parallel lines
- Types of angles- acute, obtuse, right, straight, reflex, complete and zero angle
- *Classification* of triangles (*on the basis of sides, and of angles*)
- Types of quadrilaterals – Trapezium, parallelogram, rectangle, square, rhombus.
- Simple polygons (*introduction*) (Upto octagons regulars as well as non regular).
- *Identification of 3-D shapes*: Cubes, Cuboids, cylinder, sphere, cone, corresponding, interior, exterior angles)

(ii) Properties of triangles:

- Angle sum property (with notions of proof & verification through paper folding, proofs using property of parallel lines, difference between proof and verification.)
- Exterior angle property
- Sum of two sides of a triangle is less than its third side
- Pythagoras Theorem (Verification only)

(iii) Symmetry

- Recalling reflection symmetry
- Idea of rotational symmetry, observations of rotational symmetry of 2-D objects. (90°, 120°, 180°)
- Operation of rotation through 90° and 180° of simple figures.
- Examples of figures with both rotation and reflection symmetry (both operations)

- Examples of figures that have reflection and rotation symmetry and vice-versa

(iv) Representing 3-D in 2-D:

- Drawing 3-D figures in 2-D showing hidden faces.
 - Identification and counting of vertices, edges, faces, nets (for cubes cuboids, and cylinders, cones).
 - Matching pictures with objects (Identifying names)
- (ii) Opposite angles of a parallelogram are equal,
(iii) Diagonals of a parallelogram bisect each other. [Why
(iv), (v) and (vi) follow from (ii)]
(iv) Diagonals of a rectangle are equal and bisect each other.
(v) Diagonals of a rhombus bisect each other at right angles.
(vi) Diagonals of a square are equal and bisect each other at right angles.

(ii) Representing 3-D in 2-D

- Identify and Match pictures with objects [more complicated e.g. nested, joint 2-D and 3-D shapes (not more than 2)].
- Drawing 2-D representation of 3-D objects (Continued and extended)
- Counting vertices, edges & faces & verifying Euler's relation for 3-D figures with flat faces (cubes, cuboids, tetrahedrons, prisms and pyramids)

(iii) Construction:

Construction of Quadrilaterals:

- Given four sides and one diagonal
- Three sides and two diagonals
- Three sides and two included angles
- Two adjacent sides and three angles
- Mapping the space around approximately through visual estimation.

(v) Congruence

- Congruence through superposition (examples blades, stamps, etc.)
- Extend congruence to simple geometrical shapes e.g. triangles, circles.
- Criteria of congruence (by verification) SSS, SAS, ASA, RHS

(vi) Construction (Using scale, protractor, compass)

- Construction of a line parallel to a given line from a point outside it. (Simple proof as remark with the reasoning of alternate angles)
- Construction of simple triangles.

Like given three sides, given a side and two angles on it, given two sides and the angle between them.

prism (triangular), pyramid (triangular and square)

Identification and locating in the surroundings

- Elements of 3-D figures. (Faces, Edges and vertices)
- Nets for cube, cuboids, cylinders, cones and tetrahedrons.

(iii) Symmetry: (reflection)

- Observation and identification of 2-D symmetrical objects for reflection symmetry
- Operation of reflection (taking mirror images) of simple 2-D objects
- Recognising reflection symmetry (identifying axes)

(iv) Constructions (using Straight edge Scale, protractor, compasses)

- Drawing of a line segment
- Construction of circle
- Perpendicular bisector
- Construction of angles (using protractor)
- Angle 60° , 120° (Using Compasses)
- Angle bisector- making angles of 30° , 45° , 90° etc. (using compasses)
- Angle equal to a given angle (using compass)
- Drawing a line perpendicular to a given line from a point a) on the line b) outside the line.

Mensuration (15 hrs)

Concept Of Perimeter And Introduction To Area

Introduction and general understanding *of perimeter* using many shapes. Shapes of different kinds with the same perimeter.

Concept of area, Area of a rectangle and a square *Counter examples to different misconcepts related to perimeter and area.*

Perimeter of a rectangle – and its special case – a square. Deducing the formula of the perimeter for a rectangle and then a square through pattern and generalisation.

Data handling (10 hrs)

- (i) What is data - choosing data to examine a hypothesis?
- (ii) Collection and organisation of data - examples of organizing it in tally bars and a table.
- (iii) Pictograph- Need for scaling in pictographs interpretation & construction.
- (iv) Making bar graphs for given data interpreting bar graphs+.

Mensuration (15 hrs)

- Revision of perimeter, Idea of, Circumference of Circle
Area

Concept of measurement using a basic unit area of a square, rectangle, triangle, parallelogram and circle, area between two rectangles and two concentric circles.

Data handling (15 hrs)

- (i) Collection and organisation of data – choosing the data to collect for a hypothesis testing.
- (ii) Mean, median and mode of ungrouped data – understanding what they represent.
- (iii) Constructing bargraphs
- (iv) Feel of probability using data through experiments. Notion of chance in events like tossing coins, dice etc. Tabulating and counting occurrences of 1 through 6 in a

number of throws. Comparing the observation with that for a coin. Observing strings of throws, notion of randomness.

Mensuration (15 hrs)

- (i) Area of a trapezium and a polygon.
- (ii) Concept of volume, measurement of volume using a basic unit, volume of a cube, cuboid and cylinder
- (iii) Volume and capacity (measurement of capacity)
- (iv) Surface area of a cube, cuboid, cylinder.

Data handling (15 hrs)

- (i) Reading bar-graphs, ungrouped data, arranging it into groups, representation of grouped data through bar-graphs, constructing and interpreting bar-graphs.
- (ii) Simple Pie charts with reasonable data numbers
- (iii) Consolidating and generalizing the notion of chance in events like tossing coins, dice etc. Relating it to chance in life events. Visual representation of frequency outcomes of repeated throws of the same kind of coins or dice.

Throwing a large number of identical dice/coins together and aggregating the result of the throws to get large number of individual events.

Observing the aggregating numbers over a large number of repeated events.

Comparing with the data for a coin. Observing strings of throws, notion of randomness

Introduction to graphs (15 hrs)

Preliminaries:

- (i) Axes (Same units), Cartesian Plane
- (ii) Plotting points for different kind of situations (perimeter vs length for squares, area as a function of side of a square, plotting of multiples of different numbers, simple interest vs number of years etc.)
- (iii) Reading off from the graphs
- Reading of linear graphs
 - Reading of distance vs time graph

49. Text Ganita Sutras And Upsutras

Ganita Sutras

Sr	Sutra text (Original in Sanskrit, with Roman script in brackets)
01	एकाधिकेन पूर्वेण । (<i>Ekadhikena Purvena.</i>)
02	निखिलं नवतश्चरमं दशतः । (<i>Nikhilam Navatascharam Dasatah</i>)
03	ऊर्ध्वतिर्यग्भ्याम् । (<i>Urdhvatiryagbhyam</i>)
04	परावर्त्य योजयेत् । (<i>Paravartya Yojayet</i>)
05	शून्यं साम्यसमुच्चये । (<i>Sunyam Samyasamuccaye</i>)
06	(आनुरूप्ये) शून्यमन्यत् । (<i>Anurupye Sunyamanyat</i>)
07	संकलव्यवकलनाभ्याम् । (<i>Sankalanavyavakalanabhyam</i>)
08	पूरणापूरणाभ्याम् । (<i>Puranapuranaabhyam</i>)
09	चलनकलनाभ्याम् । (<i>Calanakalanabhyam</i>)

10	यावदूनम् । (Yavadunam)
11	व्यष्टिसमिष्टिः । (Vyastisamastih)
12.	शेषाप्यङ्केन चरमेण । (SesnyankenaCaramena)
13	(सोपान्त्यद्वयमन्तम्)(Sopantyadvyamantyam)
14	एकन्यूनेन पूर्वेण । (EkanyunenaPurvena)
15	गुणितसमुच्चयः । (Gunitasamuccayah)
16	गुणकसमुच्चयः । (Gunaksamuccayah)

GanitaUpsutras

Sr.	Upsutra text (Original in Sanskrit, with Roman script in brackets)
01	आनुरूप्येण । (Anurupyena)
02	शिष्यते शेषसंज्ञः । (SisyateSesasamjnah)
03	आघमाघेनान्त्यमन्त्येन । (Adyamadyenantyamantyen)
04	केवलैः सप्तकं गुण्यात् । (KevalaihSaptakamGunnyat)
05	वेष्टनम् । (Vestanam)
06	यावदूनं तावदूनम् । (YavadunamTavadunam)
07	यावदूनं तावदूनीकृत्य वर्गं च योजयेत् । (YavadunamTavadunikrtyaVargancaYojayet)
08	अन्त्ययोर्दशके S पि । (Antyayordasake'pi)
09	अन्त्ययोरेव । (Antyayoreva)
10	समुच्चयगुणितः । (Samuccayagunitah)
11	लोपनस्थपनाभ्याम् । (LopanaSthapananabhyam)

12	विलोकनम्(<i>Vilokanam</i>)
13	गुणितसमुच्चयः समुच्चयगुणितः (<i>GunitaSamuccayaSamuccayagunitah</i>)

50. Letters tables of the text of Ganita Sutra and Upsutras

S*=Sutra, L* = Letter

Sr.	S*	L*
001	Sutra-1	ए
002	Sutra-1	क्
003	Sutra-1	आ
004	Sutra-1	ध्
005	Sutra-1	इ
006	Sutra-1	क्
007	Sutra-1	ए
008	Sutra-1	न्
009	Sutra-1	अ
010	Sutra-1	प्
011	Sutra-1	□
012	Sutra-1	र्
013	Sutra-1	व्
014	Sutra-1	ए
015	Sutra-1	प्
016	Sutra-1	अ
017	Sutra-2	न्
018	Sutra-2	इ
019	Sutra-2	ख्
020	Sutra-2	इ
021	Sutra-2	ल्
022	Sutra-2	अ
023	Sutra-2	.
024	Sutra-2	न्
025	Sutra-2	अ
026	Sutra-2	व्
027	Sutra-2	अ
028	Sutra-2	त्
029	Sutra-2	अ

030	Sutra-2	श
031	Sutra-2	च्
032	Sutra-2	अ
033	Sutra-2	र
034	Sutra-2	अ
035	Sutra-2	म्
036	Sutra-2	अ
037	Sutra-2	.
038	Sutra-2	द्
039	Sutra-2	अ
040	Sutra-2	श्
041	Sutra-2	अ
042	Sutra-2	त्
043	Sutra-2	अ
044	Sutra-2	:
045	Sutra-3	□
046	Sutra-3	घ्
047	Sutra-3	र्
048	Sutra-3	व्
049	Sutra-3	अ
050	Sutra-3	त्
051	Sutra-3	इ
052	Sutra-3	र्
053	Sutra-3	य्
054	Sutra-3	अ
055	Sutra-3	ग्
056	Sutra-3	भ्
057	Sutra-3	य्
058	Sutra-3	आ
059	Sutra-3	म्

060	Sutra-4	प्
061	Sutra-4	अ
062	Sutra-4	र्
063	Sutra-4	आ
064	Sutra-4	व्
065	Sutra-4	अ
066	Sutra-4	र्
067	Sutra-4	त्
068	Sutra-4	य्
069	Sutra-4	अ
070	Sutra-4	य्
071	Sutra-4	ओ
072	Sutra-4	ज्
073	Sutra-4	अ
074	Sutra-4	य्
075	Sutra-4	ए
076	Sutra-4	त्
077	Sutra-5	श्
078	Sutra-5	□
079	Sutra-5	न्
080	Sutra-5	य्
081	Sutra-5	अ
082	Sutra-5	
083	Sutra-5	स्
084	Sutra-5	आ
085	Sutra-5	म्
086	Sutra-5	य्
087	Sutra-5	अ

088	Sutra-5	स्
089	Sutra-5	अ
090	Sutra-5	म्
091	Sutra-5	उ
092	Sutra-5	च्
093	Sutra-5	च्
094	Sutra-5	अ
095	Sutra-5	य्
096	Sutra-6	ए
097	Sutra-6	आ
098	Sutra-6	न्
099	Sutra-6	उ
100	Sutra-6	र्
101	Sutra-6	□
102	Sutra-6	प्
103	Sutra-6	य्
104	Sutra-6	ए
105	Sutra-6	श्
106	Sutra-6	□
107	Sutra-6	न्
108	Sutra-6	य्
109	Sutra-6	अ
110	Sutra-6	म्
111	Sutra-6	अ
112	Sutra-6	न्
113	Sutra-6	य्
114	Sutra-6	अ
115	Sutra-6	त्

116	Sutra-7	स्
117	Sutra-7	अ
118	Sutra-7	
119	Sutra-7	क्
120	Sutra-7	अ
121	Sutra-7	ल्
122	Sutra-7	अ
123	Sutra-7	न्
124	Sutra-7	अ
125	Sutra-7	य्
126	Sutra-7	य्
127	Sutra-7	अ
128	Sutra-7	व्
129	Sutra-7	अ
130	Sutra-7	क्
131	Sutra-7	अ
132	Sutra-7	ल्
133	Sutra-7	अ
134	Sutra-7	ल्
135	Sutra-7	आ
136	Sutra-7	भ्
137	Sutra-7	य्
138	Sutra-7	आ
139	Sutra-7	म्
140	Sutra-8	प्
141	Sutra-8	□
142	Sutra-8	र्
143	Sutra-8	अ

144	Sutra-8	प्
145	Sutra-8	आ
146	Sutra-8	प्
147	Sutra-8	□
148	Sutra-8	र्
149	Sutra-8	अ
150	Sutra-8	प्
151	Sutra-8	आ
152	Sutra-8	भ्
153	Sutra-8	य्
154	Sutra-8	आ
155	Sutra-8	म्
156	Sutra-9	च्
157	Sutra-9	अ
158	Sutra-9	ल्
159	Sutra-9	अ
160	Sutra-9	न्
161	Sutra-9	अ
162	Sutra-9	क्
163	Sutra-9	□
164	Sutra-9	ल्
165	Sutra-9	अ
166	Sutra-9	न्
167	Sutra-9	आ
168	Sutra-9	भ्
169	Sutra-9	य्
170	Sutra-9	भ्
171	Sutra-9	म्

172	Sutra-10	य्
173	Sutra-10	आ
174	Sutra-10	व्
175	Sutra-10	अ
176	Sutra-10	द्
177	Sutra-10	□
178	Sutra-10	न्
179	Sutra-10	अ
180	Sutra-10	म्
181	Sutra-11	व्
182	Sutra-11	य्
183	Sutra-11	अ
184	Sutra-11	ष्
185	Sutra-11	ट्
186	Sutra-11	इ
187	Sutra-11	स्
188	Sutra-11	अ
189	Sutra-11	म्
190	Sutra-11	अ
191	Sutra-11	ष्
192	Sutra-11	ट्
193	Sutra-11	इ
194	Sutra-11	:
195	Sutra-11	श्
196	Sutra-11	ए
197	Sutra-11	ष्
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200	Sutra-11	ए
201	Sutra-11	अ
202	Sutra-11	इ
203	Sutra-11	क्
204	Sutra-11	ए
205	Sutra-12	न्
206	Sutra-12	अ
207	Sutra-12	च्
208	Sutra-12	अ
209	Sutra-12	र्
210	Sutra-12	अ
211	Sutra-12	म्
212	Sutra-12	ए
213	Sutra-12	प्
214	Sutra-12	अ
215	Sutra-13	स्
216	Sutra-13	ओ
217	Sutra-13	प्
218	Sutra-13	आ
219	Sutra-13	न्
220	Sutra-13	त्
221	Sutra-13	य्
222	Sutra-13	अ
223	Sutra-13	द्
224	Sutra-13	व्
225	Sutra-13	अ
226	Sutra-13	य्
227	Sutra-13	अ

228	Sutra-13	न्
229	Sutra-13	अ
230	Sutra-13	न्
231	Sutra-13	त्
232	Sutra-13	य्
233	Sutra-13	द्
234	Sutra-13	म्
235	Sutra-14	ए
236	Sutra-14	क्
237	Sutra-14	अ
238	Sutra-14	न्
239	Sutra-14	य्
240	Sutra-14	□
241	Sutra-14	न्
242	Sutra-14	ए
243	Sutra-14	न्
244	Sutra-14	अ
245	Sutra-14	प्
246	Sutra-14	□
247	Sutra-14	र्
248	Sutra-14	व्
249	Sutra-14	ए
250	Sutra-14	प्
251	Sutra-14	अ
252	Sutra-15	ग्
253	Sutra-15	उ
254	Sutra-15	प्
255	Sutra-15	इ

256	Sutra-15	त्
257	Sutra-15	अ
258	Sutra-15	स्
259	Sutra-15	अ
260	Sutra-15	म्
261	Sutra-15	इ
262	Sutra-15	च्
263	Sutra-15	च्
264	Sutra-15	अ
265	Sutra-15	य्
266	Sutra-15	अ
267	Sutra-15	:
268	Sutra-16	ग्
269	Sutra-16	उ
270	Sutra-16	प्
271	Sutra-16	अ
272	Sutra-16	क्
273	Sutra-16	अ
274	Sutra-16	स्
275	Sutra-16	अ
276	Sutra-16	म्
277	Sutra-16	उ
278	Sutra-16	च्
279	Sutra-16	च्
280	Sutra-16	अ
281	Sutra-16	य्
282	Sutra-16	अ
283	Sutra-16	:

284	Upsutra-1	आ
285	Upsutra-1	न्
286	Upsutra-1	उ
287	Upsutra-1	र
288	Upsutra-1	□
289	Upsutra-1	प्
290	Upsutra-1	य्
291	Upsutra-1	ए
292	Upsutra-1	प्
293	Upsutra-1	अ
294	Upsutra-2	श्
295	Upsutra-2	इ
296	Upsutra-2	ष्
297	Upsutra-2	य्
298	Upsutra-2	अ
299	Upsutra-2	त्
300	Upsutra-2	ए
301	Upsutra-2	श्
302	Upsutra-2	ए
303	Upsutra-2	ष्
304	Upsutra-2	अ
305	Upsutra-2	स्
306	Upsutra-2	अ
307	Upsutra-2	
308	Upsutra-2	ज्
309	Upsutra-2	
310	Upsutra-2	अ
311	Upsutra-2	:

312	Upsutra-3	आ
313	Upsutra-3	द्
314	Upsutra-3	य्
315	Upsutra-3	अ
316	Upsutra-3	म्
317	Upsutra-3	आ
318	Upsutra-3	द्
319	Upsutra-3	य्
320	Upsutra-3	ए
321	Upsutra-3	न्
322	Upsutra-3	आ
323	Upsutra-3	न्
324	Upsutra-3	त्
325	Upsutra-3	य्
326	Upsutra-3	अ
327	Upsutra-3	म्
328	Upsutra-3	अ
329	Upsutra-3	न्
330	Upsutra-3	त्
331	Upsutra-3	य्
332	Upsutra-3	ए
333	Upsutra-3	न्
334	Upsutra-3	अ
335	Upsutra-4	क्
336	Upsutra-4	ए
337	Upsutra-4	व्
338	Upsutra-4	अ
339	Upsutra-4	ल्

340	Upsutra-4	ऐ
341	Upsutra-4	:
342	Upsutra-4	स्
343	Upsutra-4	अ
344	Upsutra-4	प्
345	Upsutra-4	त्
346	Upsutra-4	अ
347	Upsutra-4	क्
348	Upsutra-4	अ
349	Upsutra-4	-
350	Upsutra-4	ग्
351	Upsutra-4	अ
352	Upsutra-4	प्
353	Upsutra-4	य्
354	Upsutra-4	आ
355	Upsutra-4	त्
356	Upsutra-5	व्
357	Upsutra-5	ए
358	Upsutra-5	ः
359	Upsutra-5	ट्
360	Upsutra-5	अ
361	Upsutra-5	न्
362	Upsutra-5	अ
363	Upsutra-5	म्
364	Upsutra-6	य्
365	Upsutra-6	आ
366	Upsutra-6	व्
367	Upsutra-6	अ

368	Upsutra-6	द्
369	Upsutra-6	□
370	Upsutra-6	न्
371	Upsutra-6	अ
372	Upsutra-6	
373	Upsutra-6	त्
374	Upsutra-6	आ
375	Upsutra-6	व्
376	Upsutra-6	अ
377	Upsutra-6	द्
378	Upsutra-6	□
379	Upsutra-6	न्
380	Upsutra-6	अ
381	Upsutra-6	म्
382	Upsutra-7	य्
383	Upsutra-7	आ
384	Upsutra-7	व्
385	Upsutra-7	अ
386	Upsutra-7	द्
387	Upsutra-7	□
388	Upsutra-7	न्
389	Upsutra-7	अ
390	Upsutra-7	
391	Upsutra-7	त्
392	Upsutra-7	आ
393	Upsutra-7	व्
394	Upsutra-7	अ
395	Upsutra-7	द्

396	Upsutra-7	□
397	Upsutra-7	न्
398	Upsutra-7	इ
399	Upsutra-7	क्
400	Upsutra-7	ऋ
401	Upsutra-7	त्
402	Upsutra-7	यृ
403	Upsutra-7	अ
404	Upsutra-7	व्
405	Upsutra-7	अ
406	Upsutra-7	र
407	Upsutra-7	ग्
408	Upsutra-7	अ
409	Upsutra-7	
410	Upsutra-7	च्
411	Upsutra-7	अ
412	Upsutra-7	य्
413	Upsutra-7	ओ
414	Upsutra-7	ज्
415	Upsutra-7	अ
416	Upsutra-7	य्
417	Upsutra-7	ए
418	Upsutra-7	त्
419	Upsutra-8	अ
420	Upsutra-8	न्
421	Upsutra-8	त्
422	Upsutra-8	य्
423	Upsutra-8	अ

424	Upsutra-8	य्
425	Upsutra-8	ओ
426	Upsutra-8	द्
427	Upsutra-8	अ
428	Upsutra-8	र्
429	Upsutra-8	श्
430	Upsutra-8	अ
431	Upsutra-8	क्
432	Upsutra-8	ए
433	Upsutra-8	ऽ
434	Upsutra-8	प्
435	Upsutra-9	इ
436	Upsutra-9	न्
437	Upsutra-9	त्
438	Upsutra-9	य्
439	Upsutra-9	अ
440	Upsutra-9	य्
441	Upsutra-9	ओ
442	Upsutra-9	र्
443	Upsutra-9	ए
444	Upsutra-9	व्
445	Upsutra-9	अ
446	Upsutra-9	स्
447	Upsutra-10	अ
448	Upsutra-10	म्
449	Upsutra-10	उ
450	Upsutra-10	च्
451	Upsutra-10	च्

452	Upsutra-10	अ
453	Upsutra-10	य्
454	Upsutra-10	अ
455	Upsutra-10	ग्
456	Upsutra-10	उ
457	Upsutra-10	प्
458	Upsutra-10	इ
459	Upsutra-10	त्
460	Upsutra-10	अ
461	Upsutra-10	:
462	Upsutra-10	ल्
463	Upsutra-11	ओ
464	Upsutra-11	प्
465	Upsutra-11	अ
466	Upsutra-11	न्
467	Upsutra-11	अ
468	Upsutra-11	रु
469	Upsutra-11	थ्
470	Upsutra-11	आ
471	Upsutra-11	प्
472	Upsutra-11	अ
473	Upsutra-11	अ
474	Upsutra-11	न्
475	Upsutra-11	आ
476	Upsutra-11	भ्
477	Upsutra-11	आ
478	Upsutra-11	प्
479	Upsutra-11	व्

480	Upsutra-12	इ
481	Upsutra-12	ल्
482	Upsutra-12	ओ
483	Upsutra-12	क्
484	Upsutra-12	अ
485	Upsutra-12	न्
486	Upsutra-12	अ
487	Upsutra-12	म्
488	Upsutra-12	ग्
489	Upsutra-13	उ
490	Upsutra-13	प्
491	Upsutra-13	इ
492	Upsutra-13	त्
493	Upsutra-13	अ
494	Upsutra-13	स्
495	Upsutra-13	अ
496	Upsutra-13	म्
497	Upsutra-13	उ
498	Upsutra-13	च्
499	Upsutra-13	च्
500	Upsutra-13	अ
501	Upsutra-13	य्
502	Upsutra-13	अ
503	Upsutra-13	:
504	Upsutra-13	स्
505	Upsutra-13	अ
506	Upsutra-13	म्
507	Upsutra-13	उ

508	Upsutra-13	च्
509	Upsutra-13	च्
510	Upsutra-13	अ
511	Upsutra-13	य्
512	Upsutra-13	अ
513	Upsutra-13	ग्
514	Upsutra-13	उ

515	Upsutra-13	ण्
516	Upsutra-13	इ
517	Upsutra-13	त्
518	Upsutra-13	अ
519	Upsutra-13	:

51. 36 letters range `avail by the Text of Ganita Sutras and Upsutras

Sr.	1	2	3	4	5	6	7	8	9	10	
Letters	अ	आ	इ	ई	उ	□	ऋ	ए	ऐ	ओ	

Sr.	1	1	1	1	1	1	1	1	1	2
	1	2	3	4	5	6	7	8	9	0
Letters	क्	ख्	ग्	ङ.	च्	ज्	□	ट्	ण्	त्
Sr.	2	2	2	2	2	2	2	2	2	3
	1	2	3	4	5	6	7	8	9	0
Letters	थ्	द्	ध्	न्	प्	भ्	म्	य्	र्	ल्
Sr.	3	3	3	3	3	3				
	1	2	3	4	5	6				
Letters	व्	श्	स्	ष्	.	:				

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