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Vedic mathematics notes

Organization format of Vedic Ganita Sutras Text & Mathematics

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Vedic Ganita sutras (VGs) text⁽¹⁾

VGS text is in *Devnagri*⁽²⁾ (DN). The letters of DN have their specific placements⁽³⁾ and other *sathapatya*⁽⁴⁾ characteristics⁽⁵⁾ being external⁽⁶⁾, middle⁽⁷⁾ and internal⁽⁸⁾. Vedic knowledge systems⁽⁹⁾ accept *sathapatya* format⁽¹⁰⁾. It is of *Chatushpeet*⁽¹¹⁾ of creator⁽¹²⁾ *Brahma*⁽¹³⁾.

Brahama is the titulary (god)⁽¹⁴⁾ of measure⁽¹⁵⁾ of both *sathapatya* measuring rod⁽¹⁶⁾ and rope⁽¹⁷⁾. *Vishnu*⁽¹⁸⁾ is the titulary (god) of the measuring rod while *Vashukinaag*⁽¹⁹⁾ is the titulary god of measuring rope.

VGS text of 16 sutras is of 283 letters⁽²⁰⁾, while 13 upsutras are of 236 letters⁽²¹⁾. Of these 519 letters of VGS text, there are only 36 distinct⁽²²⁾ letters. The first letter is the sixth vowel⁽²³⁾, while the last letter, Visageniah is the fifth yama⁽²⁴⁾ letter.

Compactified DN format

Devnagri of *Chatushpeet* is of compactified format of five folds:

(1) letters alphabet⁽²⁵⁾, (2) Numbers alphabet⁽²⁶⁾, and (3) Sathapatya format, which is of three folds: (i) External⁽⁶⁾, (ii) Middle⁽⁷⁾ and (iii) Internal⁽⁸⁾ characteristics feature.

Transition from letters alphabet⁽²⁵⁾ to numbers alphabet takes us from letters text⁽¹⁾ of VGS to numbers text⁽²⁷⁾ of VGS. The transition from numbers text to Sathapatya text⁽²⁸⁾ is in terms of parallel values of Sankhiya⁽²⁹⁾ Nishta and Yoga⁽³⁰⁾ Nishta.

Three folds of external⁽⁶⁾, middle⁽⁷⁾ and internal⁽⁸⁾ characteristics of *sathapatya* alphabet are as per the Upanshids settlement, particularly of Mandal⁽³¹⁾ upanshid and Dhakshna murti⁽³²⁾ Upanshid.

Manifested⁽³³⁾ values of Sathapatya alphabet

Chatushpeet is of transcendental origin. It is a seat of Uma⁽³⁴⁾ and Neelkanth⁽³⁵⁾. Of solid order⁽³⁶⁾ of transcendental origin⁽³⁷⁾, the first axis manifests external characteristics. The second and third axes, respectively manifest middle and internal characteristics. The transcendental origin seat being within spatial order⁽³⁸⁾ of Chatushpeet, as such axes of solid order manifested values are of spatial format⁽³⁹⁾.

Sathapatya features of origin of Chatushpeet

Origin of Chatushpeet is 'transcendental of solid order⁽⁴⁰⁾'. The transcendental domain is enveloped within creative boundary⁽⁴¹⁾ of ten components, of classified organization of 4 and 6 components, as:

6 = षट् and placement value for (षट्) = 10 = दश. Further, the placement value for (दश) is 10.

This as such, makes basis base for organization of ten components boundary as of two parts (4, 6). Parallel to it, are four phases and six folds of sathapatya.

Four phases of shabdh⁽⁴²⁾ are:

- (i) Shabdh / word as wholesome format,
- (ii) Akshar⁽⁴³⁾ / syllables / vowels of the Shabdh (Word),
- (iii) Varan⁽⁴⁴⁾ / letters of the Shabdh (Word) and
- (iv) Placement values of letters of the Shabdh (Word).

Six folds of sathapatya format are parallel to spatial format for triple axes of the solid order of the transcendental origin of the Chatushpeet.

Features of Four phases and six folds of sathapatya

Sathapatya phase-1

First phase is parallel with the wholesome value of sathapatya format of Shabdh of Akash⁽⁴⁵⁾ placement. The placement value of Akash is '8', which is parallel with placement value of Ek (one). As such the manifested value of first phase becomes '1'.

Sathapatya phase-2, 3 & 4

Second, third and fourth phases of sathapatya format are parallel with, the external, middle and internal characteristics, which together make six folds.

Sathapatya phase 2 folds 1 and 2

Phase 2 of sathapatya is number of syllables / vowels of shabdh (word). Parallel to it are folds 1 and 2 of features of first axis of solid order of transcendental origin. These features are of characteristics of *vartni*⁽⁴⁶⁾ (sequential placements of letters as fold 1) and *uccharan*⁽⁴⁷⁾ (pronouncing frequencies of the letters as fold 2).

Manifested value of fold 1

The first fold manifests the transcendence flow⁽⁴⁸⁾ through vowels as dimensional frame of value 'N x (N-2) N-4' for vowel N as N domain⁽⁴⁹⁾ of N-2 dimension⁽⁵⁰⁾ and (N-4) dimension of dimension⁽⁵¹⁾. Letter(s) of placement value V before vowel N, of syllable, will make transcendence flow as manifested value of fold 1 as: 'V (V-2) V-4'

Manifested value of fold 2

The second fold manifests Uccharan⁽⁵²⁾ / pronouncing frequency for each letter as placement value of the letter plus 20 of (Karah), for all letters except Raif⁽⁵³⁾. The addition value for Raif is '12'.

Sathapatya phase 3, folds 3 and 4

Phase 3 is of features of 'number of letters' of the Shabd word. Parallel to it are folds 3 and 4 of features of second axis of solid order of transcendental origin. These features are of characteristics of *Pada*⁽⁵⁴⁾ formulation of placement value of letter of Shabd and pada arth satta⁽⁵⁵⁾ (numbers values of the letters of the word as sathapatya body⁽⁵⁶⁾ formats).

Manifested value of fold 3

The numbers values 1 to 9 and 13 manifest word formulations of placement values table-1 as under:

R1	1	2	3	4	5	6	7	8	9	13
R2	एक	द्वय	त्रय	चतुर्	पञ्च	षट्	सप्त	अष्ट	नव	त्रयोदश
R3	8	16	8	12	15	10	14	11	17	24

Table-1

R1 = Number value, R2 = Word formulation, R3 = Placement value of word formulation.

Manifested value of fold 4

The numbers values 1 to 9 and 13 manifest sathapatya bodies H_N of four folds of summation values table-2 as under:

Number value	Sathapatya body	Sum of four folds	
H_N	N-2, N-1, N, N+1	4N-2	N = 1-9, 13

R1	1	2	3	4	5	6	7	8	9	13
R2	1-s	2-s	3-s	4-s	5-s	6-s	7-s	8-s	9-s	13-s
R3	H_1	H_2	H_3	H_4	H_5	H_6	H_7	H_8	H_9	H_{13}
R3	2	6	10	14	18	22	26	30	34	50

Table-2

R1 = Number value, R2 = N-space, N = 1, 2, 3,, R3 = N-space body, R4 = sum of four folds of N space body N = 1, 2, 3,,

Sathapatya phase 4, folds 5 and 6

Phase 4 is of Vakaya-pankti⁽⁵⁷⁾ (sentence arth parvaha / transcendental content flow manifestation of the order of the value of the letter of the word, and sany vakaya-pankti sanyog⁽⁵⁸⁾ / transcendental content synthesis of flow manifestation of a pair of streams of same order⁽⁵⁹⁾).

Manifested value of fold 5

The number value of fold 5, for number value N, is the summation value of 5 steps long transcendental flow (N, N+1, N+2, N+3, N+4) is $5N+10$, for N = 1 to 9, 13.

Manifested value of fold 6

The manifested value of fold 6, for pair of transcendental flow streams of order N, is:

$$(5N+10)+N+(5N+10) = 11N+20, N = 1 \text{ to } 9, 13.$$

Consolidated table

The consolidated table of manifested values of sathapatya phases and folds is as under:

Phase	Sathapatya format	Phase folds	Manifested value of phase fold
Phase 1 (Word)	Wholesome feature of solid order	Wholesome state	One
Phase 2 (Syllables / Vowels)	External axis features of solid order	Sathapatya fold 1 fold 2	Number of vowels Number of letters
Phase 3 (Letters)	Middle axis features of solid order	Sathapatya fold 3 fold 4	Table-1 Table-2
Phase 4 (Placement values of letters)	Internal axis features of solid order	Sathapatya fold 5 fold 6	$5N+10$ $11N+20$

Vedic knowledge as a speaking language⁽⁶⁰⁾

Vedic knowledge, in its composed form, has reached us, as a 'wholesome and unified discipline⁽⁶¹⁾', as a speaking language of devnagri alphabet. Shiskavalli of Tatterya⁽⁶²⁾ Upanshid settles and preserve six steps of speaking knowledge being

Om ! We shall speak of the science of pronunciation. (The things to be learnt are) the alphabet, accent, measure, emphasis, uniformity, juxtaposition. This has been spoken the chapter on pronunciation.

This six steps phasing is of triple pairs, which together, stand settled in mandal upanshid and dakshinmurti upanshid, parallel to triple axes of solid order of transcendental origin, of chatushpeet.

This, as such becomes parallel with meanings flow as sentences⁽⁶³⁾ of padas⁽⁴⁴⁾ having sequential varni⁽⁴⁵⁾ and Uccharan.

This transcendental flow is designated as divya ganga parvaha⁽⁴⁷⁾ from the origin seat of Chatuspeet as bindu sarovar⁽⁴⁸⁾ fountaining seven streams through artifices of components of sole syllable Om.

Transcendence through quadruple components of Om takes to Pushpika of (Self referral⁽⁶⁶⁾ origin of Kamal Aasan⁽⁶⁵⁾)

Shiv: transcendental domain formulation⁽⁶⁷⁾

Formulation Shiv is of sathapatya four phases and six folds manifested values as under:

Phase-1	शिव	1	1	
Phase-2	शि व	2	3	
Phase-3	श इ व अ	4	7	
Phase-4	2, 2, 7, 1	12	19	मध्य / middle
Fold-1	शि व 2x0+7x3	21	21	
Fold-2	2+20, 2+20, 7+20, 1+20	92	113	
Fold-3	16, 16, 14, 8	54	167	
Fold-4	6, 6, 26, 2	40	207	
Fold-5	20, 20, 45, 15	100	307	
Fold-6	42, 42, 97, 31	212	519	Total letters of Ganita sutras & upsutras

Maheshwara⁽⁶⁸⁾ Sutras

Maheshwara sutras are 14. These sutras coordinate vowels and consonants of devnagri. The placement values table of letters of these sutras sum up 283, precisely parallel with 283 letters of 16 Ganita Sutras:

Gyatri Mantra⁽⁶⁹⁾

Formulation Gyatri (गायत्री) is of placement value $3+2+1+1+4+1+4 = 16$. Gyatri mantra is a composition of 13 words. The placement values of letters of these 13 words, as well precisely is 283, parallel with 16 ganita sutras.

Gaps bridging values of Geeta⁽⁷⁰⁾

Text of Geeta is of 18 chapters of Shalokas (47, 72, 43, 42, 29, 30, 28, 34, 42, 55, 20, 34, 27, 20, 24, 28, 78). Their gap values are (29, 25, 1, 13, 1, 2, 6, 8, 13, 35, 14, 7, 7, 4, 4, 50, 31) of summation value 284, one more than 283, number of letters of 16 Ganita Sutras.

Devnagri vowels and consonants⁽⁷¹⁾

Formulation Devnagri varanmala, is of placement value 77. Nine Vowels are of placement value 45 and 33 Consonants are of placement value 181. These together $(77+45+181) = 283$ is parallel with 283 letters of 16 ganita sutras.

Mandukyo Upanshid⁽⁷²⁾

Mandukyo upanshid unfolds formulation Aum as (A, U, M and AUM) parallel with four quarters of Brahm as well as of Aatma. The placement value of these quadruples quarters is (1, 3, 9, 16) which for first three quarter as $1+3+9 = 13$ and of fourth quarter as 16 is parallel with upsutras being 13 and sutras being 16.

Factors of Numbers range 1 to 16

The numbers range 1 to 16 leads to factors 29. The value $29 = 16+13$ as values pair (16, 13) is parallel with upsutras being 13 and sutras being 16.

Ganita sutra-1 the source sutra

VGS-1 text is of 16 letters. The sathapatya formats of these letters make sequential structural keys for sutra-1 to sutra-16 sutras. VG upsutra-1 is the source upsutra. It is of ten letters. The beginning, middle and end placements, together with placements of ten letters of Ganita upsutra-1 make structural keys of Ganita upsutras 1 to 13. Ganita upsutras also bridge the gaps between consecutive sutras. The integrated of Ganita sutras and upsutras is of 29 sequential steps as under:

Step	Sutra / Upsutra	Step	Sutra / Upsutra	Step	Sutra / Upsutra
1	S-1	11	S-6	21	US-10
2	US-1	12	US-6	22	S-12
3	S-2	13	S-7	23	US-11
4	US-2	14	US-7	24	S-13
5	S-3	15	S-8	25	US-12
6	US-3	16	S-9	26	S-14
7	S-4	17	US-8	27	US-13
8	US-4	18	S-10	28	S-15
9	S-5	19	US-9	29	S-16
10	US-5	20	S-11		

Source sutra: Ganita sutra-1

Translation of letters text to numbers text

Letter	ए	क्	आ	ध्	इ	क्	ए	न्	अ
TCV	6	4	2	7	2	4	6	8	1
Letter	प्	ऊ	र्	व्	ए	प्	अ		
TCV	5	6	3	7	6	7	1		

Translation of numbers text to sathapatya text

TCV	6	4	2	7	2	4	6	8	1
Sathapatya	6S	4S	2S	7S	2S	4S	6S	8S	1S
TCV	5	6	3	7	6	7	1		

Sathapatya	5S	6S	3S	7S	6S	7S	1S		
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(i) External characteristics (Boundary fold)

Sathapatya	6S	4S	2S	7S	2S	4S	6S	8S	1S
Body Boundary components	12	8	4	14	4	8	12	16	2
Sathapatya	5S	6S	3S	7S	6S	7S	1S		
Body Boundary components	10	12	6	14	12	14	2		

(ii) Middle characteristics (Middle Geometry)

Sathapatya	6S	4S	2S	7S	2S	4S	6S	8S	1S
Middle (Signautre) Geometry	7	5	3	8	3	5	7	9	2
Sathapatya	5S	6S	3S	7S	6S	7S	1S		
Middle (Signautre) Geometry	6	7	4	8	7	8	2		

(iii) Internal characteristics (Quadruple folds value)

Sathapatya	H6	H4	H2	H7	H2	H4	H6	H8	H1
Middle (Signature) Geometry	22	18	6	26	6	18	22	30	2
Sathapatya	H5	H6	H3	H7	H6	H7	H1		
Middle (Signature) Geometry	18	22	10	26	22	26	2		

Vedic ganit sutras mathematics

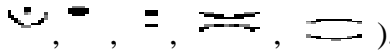
VGS text is having formulations for values (0, 1, 2, 7, 9, 10). The values (3, 4, 5, 6, 8) out of the range 0 to 10 are not, as such, part of the VGS text. OV&F of the text as values (0, 1, 2, 7, 9, 10) make foundation for VGS mathematics. And, values (3, 4, 5, 6, 8) make foundation for OV&F of VGS text. The summation value of values (0, 1, 2, 7, 9, 10) = 29 is parallel with the 29 hymns (16 sutras and 13 upsutras). The summation value of values (3, 4, 5, 6, 8) = 26 is parallel with placement values of formulation sopan, as well as of devta. The values pair (26, 29) is end pair of quadruple values (26, 27, 28, 29) of four folds of hyper cube 28, the second perfect number. This makes a reach from value 6 as placement value of the first letter (6th vowel) of VGS text to value 28 as placement value of formulation Brahm. With it, vedic mathematics (VGS mathematics) is of the range: Surya (Sun) to Brahm (Eternity). Surya rashmi (ray of the sun) is of placement value $13+17 = 30$, is the placement value of Chatuspeet, which is also parallel to summation value of four folds of hyper cube 8, the represented regular body of 8-space (asht prakarti).

Values range (0, 1, 2, 7, 9, 10) of summation value 29 is parallel with 29 reflection pairs of upper part of 9x11 grid of double digit numbers of ten place value system. The summation of values pair (29, 26) = 55, is the placement value of mirror line (55, 66, 77, 88, 99) of lower part of the grid 9x11. The upper part of the grid manifests integrated format of 16 sutras and 13 upsutras. The upper and lower parts of grid 9x11 manifests VGS mathematics of Chatusheet of transcendental origin.

Chatusheet as Surya rashmi manifests surya parkash. Rashmi flourishes within jyoti and man flourishes as jyotir as the transcendental domain of VGS mathematics of the Chatusheet.

With it, stands settled placements values format for sapt bhumi (7-space) / Dhru / pole star as a bridge between surya (6-space) and Asht prakarti (8-space) as of $13 \times 4 = 52$ phases parallel with 4-space as dimension for 13 geometries of 6-space of 13 versions of hyper cube 6 as bodies of 13 geometries of 6-space.

These 52 phases of placement values are:

- (i) 14 vowels as 14 manu (of format of 14 components of self referral boundary / 6-space as boundary of 7-space),
- (ii) First 12 consonants as 12 adityas (of format of 12 components of transcendental boundary / 5-space as boundary of 6-space),
- (iii) Next 11 consonants as 11 rudras (of format of 11 versions of hyper cube 5),
- (iv) 8 consonants as 8 vashu (of format of 8 components of solid boundary of 4-space),
- (v) And last 2 consonants as ashwin kumar (of the format of spatial dimension of creator's space / 4-space / Chatusheet).
- (vi) Five yama are matrikas ().

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**Organization format features of
text of Ganita Sutras and Upsutras**

Dr. S.K. Kapoor

Abstract

Two basic poser's about Vedic Ganita Sutras and Upsutras¹ are, firstly, as to their vedic source and secondly, regarding their mathematical potentialities. As the original vedic text from which BKT² copied VGS³ text is not traceable yet, as such we have to depend upon the organization format features of this VGS text to evaluate and appreciate if the same deserves to be a member of Vedic family scriptures, with source scripture being Shakala Rigved Samhita of ten mandals, and Mandalounishad preserves the values format of bhair (external), madey (middle) and antrik (inward) flow features. Further about mathematics potentialities of these Sutras, as well, we have to go to the shelter of the organization format features and structural keys are provided by this text. Each system is to be approached, the system way. BKT has demonstrated that the Vedic system is of Transcendental meditation format and as such by approaching Ganita Sutras the Vedic way, we will be face to face with the blissful potentialities reach of Ganita Sutras. The present paper, being the first of its nature, the same as such has its inherent constraints but despite that the structural data which could be laid hand at, is helping reach at positive conclusion regarding vedic source as well as the potentialities being indicated by BKT. Ganita Sutras organization format features are parallel with the Vedic family scriptures. There potentialities as well are of the order of Vedas.

Text table 6 Ganita Sutras text

Initial structural data features

The VGS text is in Devnagri script. It avails 283 letters for 16 Sutras and 236 letters for Upsutras. However, there are only following 36 distinct letters of Devnagri alphabet being availed here:-

Feature 1 36 Distinct letters of text

Table 7 distinct 36 letters

Table 8 devnagri alphabet

Feature 2 Compactified format of DA

Parallel with letters alphabet format (Akshar Samvanaye अक्षरसाम्मवाय) there is a parallel अङ्कसाम्नाय) Ank Samanaye (numbers alphabet). The parallel format features and values of Sankhiya Nishtha (संख्या निष्ठा) and Yoga Nishtha (योग निष्ठा) make compactified format of Devnagri alphabet being of five folds (Panchvritya) (पञ्चवृत्तय), namely letters alphabet, numbers alphabet, sathapatya (geometric) alphabet and of content flow format (Divya Ganga Parvah) (दिव्यगङ्गाप्रवाह) and manifestation format (मूर्तिमान सत्ता).

Table 9 Devnagri with TCV values

Sathapatya (geometric) format

Upnishads⁽¹⁾ values are the essence of Vedas. Upnishads put sadkhas on the format of three folds features (1) बर्हिलक्षण / external (2) मध्यलक्षण / middle and (3) आन्तरिकलक्षण / internal. Mansara⁽²⁾, scripture of Sathapatya upved of Atharavved, preserves that Vishnu is the presiding deity of measuring rod, Vasuki Nag is presiding deity of measuring rope (रज्जु), while Brahma is the presiding deity of measurement.

External features (बर्हिलक्षण)

Figure 1 sathapatya measuring rod

The external characteristics of shad chakras are (2, 4, 6, 8, 10, 12) parallel to the boundary components of Hyper cubes 1 to 6 synthesizing Sathapatya measuring rod presided by Vishnu. Brahma is the presiding deity of measurements.

Figure 2

Formulation (बहि-लक्षण) is of TCV 21 + 22. The values pair (21, 22) is parallel with the TCV values pair of pair of formulations (पूर्व, पश्चिम्) / east, west.

Four head lord Brahma is the overlord of 4-space. lord Brahma meditates within cavity of his own heart and with grace of Transcendental lord Shiv, Brahma multiplies as ten Brahmas in Shiv lok.

Figure 3, 4, 5, 6

Along Sathpatya format, this amounts to transition from 4-space as domain to 4-space as boundary of 10 components of 5-space.

Sequentially the transition ahead is from 4-space as boundary of 5-space to 4-space as dimension of 6-space.

Figure 7

It is the reach at middle (मध्य), and step ahead the transition is going to be within 6-space and it is going to be of inward (आन्तरिक) transition features.

figure 8 and 9

Ganita Sutra 1 : Source feature

Figure 10

Ganita Sutra 1 is the source Sutra. Its first letter षट् and (षट्) = 10 = दश and (दश) = 10. And 10 = organizes boundary $10B^4$ of A^5 of two parts of boundary components and 6 boundary components. Parallel to it, there happens two phases of 10 folds, of four folds and six folds respectively. The first phase of four folds manifest as शब्द word (in short **W**), अक्षर syllable (in short **S**), वर्ण letter (in short **L**) and दिव्य अंक Transcendental placement number / Transcendental code value (in short **T**). The second phase six folds manifests as triple pairs of folds, respectively being parallel to

$$A^5:10B^4 \quad \begin{array}{r} (\text{ए}) = 6 = \\ 4 \quad + \quad 6 \\ \text{four} \end{array}$$

(1) बहि-लक्षण, (external features) / as

Figure 11

- a. **वर्तनि** Transcendental Transcendence through dimension and dimension of dimension (in short **TT**)
- b. **उच्चारण** / formulations pronouncing frequencies (in short **FF**)

(2) **मध्यलक्षण** (middle features) and

- a. **पद** formulation / (in short **F**)
- b. **अर्थ** formulations yogic / geometric format / (in short **H**)

figure 12

(3) **आन्तरिकलक्षण** (internal features).

- a. **वाक्य** values flow range / (in short **R**)
- b. **भाव संयोग** values flow ranges synthesis (in short **SR**)

Figure 13

Ganita Sutra 2 source feature

Ganita Sutra 2 text is a composition of three words formulation of TCV values triple (28, 50, 29) which on its chase in the light of the triple folds ((1) बर्हिलक्षण / external (2) मध्यलक्षण / middle and (3) आन्तरिकलक्षण / internal.) preserve in Mandal Upnishad bring us face to face with the following phases and stages of such organization :-

(1) values pair (28, 29) as of the format of 28 gaps of 29 points range	Figure 14
(2) This organization of set up of discrete points range along with gaps makes a set up of $(28 + 29) = 57$ structural components set up.	Figure 15
(3) The distinct generic pair of structural components set up is there because of distinct dimensional orders (here, 0 order of 2-space) and (1 order of 3-space) makes a manifestation of spatial order 4 space and solid order 5-space. This manifestation as of external, middle and internal features, brings in 7 points sustaining support.	Figure 16
(4) Accordingly the set up of structural components of distinct generic structures, in addition to the sustenance support 7 components, comes to be of $57 - 7 = 50$ components.	Figure 17

Sum up and Conclusion

Shakala Rigved Samhita is the source scripture. It is organized as ten mandals. The formulation mandal gives rise to its first four folds of value 40 and of its next six folds being of value 1108 which is parallel with the TCV values of Ganita Sutras 1107 and same as a cyclic system beginning with rule one more than before of Ganita Sutra 1 makes it $1107 + 1 = 1108$. Transcendental formulation 'Shiv' gives rise to its first four folds of value 19 and its next six folds being of value 519 which is parallel with the total letters of complete text of 16 Ganita Sutras and 13 Ganita Upsutras. Further Maheshwara Sutras lead us to TCV value 283 which is parallel with total letters of the text of Ganita Sutras. The gap values of 18 punctuations (chapters) of Divine Dialogue of Geeta sum up value 284 which is one more than 283, the total letters of the text of Ganita Sutras. The quadruple quarters organization of formulation AUM as (अ, उ, ऋ, ओम्) is of values format (1+ 3+ 9, 16) which is parallel with the organization features of 16 Sutras and 13 Upsutras. The values range 1 to 16 is of factors 1 to 29 and $29 = 16 + 13$ brings to focus principal value 16 and additional factors 13 parallel with the feature of 16 Sutras and 13 Upsutras. These features lead us for the sum up and conclusion for acceptance of Ganita Sutras and upsutras being a scripture of Vedic scriptures family. The structural keys lively within the text of 16 letters in the sequential order of 16 Sutras, together with the Aadi chakra values of integrated format of 16 Sutras and 13 Upsutras together, as such further lead us for the sum up and conclusion for acceptance of potentialities of the Ganita Sutras and Upsutras mathematics being of basis base values of Vedic knowledge. The value $16 + 13 = 29$ being parallel with TCV (ब्रह्मा), creator the supreme, a four head lord and presiding deity of measures is

the blissful value and feature which brings in Shradha (श्रद्धा) / faith and nishtha (निष्ठा) / conviction in favour of source and potentialities being the 'Vedic Ganita Sutras' of order of Vedic knowledge systems.



Structural keys format of Ganita Sutra 1

Table 1

Structural keys of Ganita Sutras table A

Sutra	Serial number of Letter of Sutra 1 with TCV value			First letter of the corresponding Sutra			Structural keys Pair values of C4 and C7 as end values of structural keys format
C1	C2	C3	C4	C5	C6	C7	C8
	SN	letter	TCV	Ganita Sutra	First Letter	TCV	
1	1	ए	6	1	ए	6	(6, 6)
2	2	क्	4	2	न	8	(4, 8) (4, 5, 6, 7, 8)
3	3	आ	2	3	ऊ	6	(2, 6) (2, 3, 4, 5, 6)
4	4	ध्	7	4	प्	5	(7, 5) (7, 6, 5)
5	5	इ	2	5	श्	2	(2, 2)
6	6	क्	4	6	आ	2	(4, 2) (4, 3, 2)
7	7	ए	6	7	स्	3	(6, 3) (6, 5, 4, 3)
8	8	न्	8	8	प्	5	(8, 5) (8, 7, 6, 5)
9	9	अ	1	9	च्	2	(1, 2)
10	10	प्	5	10	य्	1	(5, 1) (5, 4, 3, 2, 1)
11	11	ऊ	6	11	व्	7	(6, 7)
12	12	र् / र्	3	12	श्	2	(3, 2)
13	13	व्	7	13	स्	3	(7, 3) (7, 6, 5, 4, 3)
14	14	ए	6	14	ए	6	(6, 6)
15	15	ण्	7	15	ग्	3	(7, 3) (7, 6, 5, 4, 3)

16	16	अ	1	16	३	3	(1, 3) (1, 2, 3)
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Table 2

Structural keys of Ganita Sutras **table B**
Structural keys Sathapatya formats

Sutra				
C1	C4	C7	C8	C9
	TCV	TCV	Structural key	Sathapatya format
1	6	6	(6, 6)	Self referral Sathapatya format for 6-space
2	4	8	(4, 5, 6, 7, 8)	Transcendence Range order 4
3	2	6	(2, 3, 4, 5, 6)	Transcendence Range order 2
4	7	5	(7, 6, 5)	Transcendence flow 7 to 5
5	2	2	(2, 2)	Karam Samapati format (interval and square within square)
6	4	2	(4, 3, 2)	Transcendence flow 4 to 2
7	6	3	(6, 5, 4, 3)	Hyper cube 5 in reverse orientation
8	8	5	(8, 7, 6, 5)	Hyper cube 7 in reverse orientation
9	1	2		
10	5	1	(5, 4, 3, 2, 1)	Transcendence range order 1
11	6	7	(6, 7)	Enveloped domain 7
12	3	2		Enveloped domain 3
13	7	3	(7, 6, 5, 4, 3)	Transcendence range order 3 in reverse orientation
14	6	6	(6, 6)	Self referral Sathapatya format for 6-space

15	7	3	(7, 6, 5, 4, 3)	Transcendence range order 3 in reverse orientation
16	1	3	(1, 2, 3)	Transcendence from 3 to 1 in reverse orientation

Table 3

Aadi Chakra (initial existence cycle) of Ganita Sutra 2

Aadi Chakra (beginning cycle)

SN	Sutra	Upsutra	Number of letters	Word
1	1		16	आदिचक्र
2		1	10	शक्ति
3	2		28	ब्रह्म
4		2	18	प्रकृति
5	3		15	तेज
6		3	23	अंहकार
7	4		17	आत्मा
8		4	21	शिवालय
9	5		20	श्रीः
10		5	08	आकाश
11	6		19	अमृत
12		6	18	विद्या
13	7		24	पुरुष
14		7	37	श्रीभगवान
15	8		16	जीव
16	9		16	प्राण
17		8	16	बीज्
18	10		09	काल
19		9	11	यजु
20	11		14	रज्जु

21		10	16	गायत्री
22	12		20	देव
23		11	17	दिव्य
24	13		20	वेद
25		12	09	राग
26	14		17	द्रव्य
27		13	32	जर्नादन
28	15		16	ओम्
29	16		16	ॐ

Table 4

Source formulations ten folds

Formulation Mandal

Ten folds of TCV of

Word formulation 'मंडल'

S N.	Symbol	Value	Total
1.	W	1	1
2.	S	3	4
3.	L	7	11
4.	T	29	40
5.	T T	78	78
6.	F F	169	247
7.	F	85	332
8.	H	102	434
9.	R	215	649
10.	SR	459	1108

Table 5

Ganita Sutras with TCV values

Sutra	TCV	Total
1.	68	68
2.	107	175
3.	56	231
4.	52	283
5.	71	354
6.	76	430
7.	114	544
8.	67	611
9.	56	667
10.	41	708
11.	58	766
12.	73	839
13.	79	918
14.	81	999
15.	56	1055
16.	52	1107

Note :- $1107 + 01 = 1108$.

Table 6

Formulation Shiv

Ten folds of TCV of

Word formulation 'शिव'

S N.	Symbol	Value	Total
1.	W	1	1
2.	S	2	3
3.	L	4	7
4.	T	12	19
5.	T T	21	21
6.	F F	92	113
7.	F	54	167
8.	H	40	207
9.	R	100	307
10.	SR	212	519

Table 7

Text of VGS

VGS text of 16 sutras and 13 upsutras is as follows

**OR SIXTEEN SIMPLE MATHEMATICAL FORMULAE FROM THE VEDAS
SIXTEEN SUTRAS AND THEIR COROLLARIES**

Sutras	Sub-Sutras or Corollaries
1. एकाधिकेनपूर्वेण EkadhikenaPurvena (alsoa corollary)	1. आनुरूप्येण Anurupyena
2. निखिलंनवतश्चरमंदशतः NikhilamNavatascaramamDasatah	2. शिष्यते शेषसंज्ञः SisyateSesasamjnah
3. ऊर्ध्वतिर्यग्भ्यायम् Urdhva-tiryagbhyam Adyamadyenatyamantylenea	3. आद्यमाद्येनान्त्यमन्त्येन
4. परावर्त्य योजयेत् ParavartyaYojayet	4. केवलैः सप्तकंगुण्यात् KevalaihSaptakamunyat
5. शून्यंसाम्यसमुच्चये SunyamSamyasamuccaye	5. वेष्टनम् Vestanam
6. (आनुरूप्ये) शून्यमन्यत् (Anurupye) Sunyamanyat	6. यावदूनंतावदूनम् Yavadunamavadunikrtya
7. संकलनव्यवकलनाभ्याम् Sankalana-vyavakalanabhyam (also a corollary)	7. यावदूनंतावदूनीकृत्य वर्गं च योजयेत् YavadunamTavadunikrtyaVarganca yojayet
8. पूरणापूरणाभ्याम् Puranapuranaabhyam	8. अन्त्ययोर्दशकेऽपि Antyayordasake 'pi
9. चलनकलनाभ्याम्	9. अन्त्ययोरेव

Calana-kalanabhyam	Antyayoreva
10. यावदूनम् Yavadunam	10. समुच्चयगुणितःSamuccayagunita
11. व्यष्टिसमष्टिःVyastisamastih	11. लोपनस्थापनाभ्याम्Lopanasthapanabhyam
12. शेषाण्यङ्.केनचरमेण SesanyankenaCaramena	12. विलोकनम् Vilokanam
13. सोपान्त्यद्वयमन्त्यम् Sopantyadvayamantyam	13. गुणितसमुच्चयः समुच्चयगुणितः GunitasamuccayahSamuccayagunitah
14. एकन्युनेनपूर्वेणEkanyunenaPurvena	
15. गुणितसमुच्चयःGunitasamuccayah	
16. गुणकसमुच्चयःGunakasamuccayah	

[Note: This list has been compiled from stray references in the text—
Editor]

Table 7

The distinct letters of texts of Ganita Sutras & Upsutras are 36:

- (1) अ (2) आ (3) इ (4) ई (5) उ (6) ऊ (7) ऋ (8) ए (9) ओ (10) ऐ
 (11) क् (12) ख् (13) ग् (14) ङ् (15) च् (16) ज् (17) झ् (18) ट्
 (19) ण् (20) त् (21) द् (22) ध् (23) न् (24) प् (25) भ् (26) म् (27)
 य् (28) र् (29) ल् (30) व् (31) श् (32) स् (33) ष् (34) ङ् (35) ँ

(36) ऽ

table 8

Organization of Devnagri alphabet (DA)

Devnagri alphabet (DA), as letter alphabet is of following organization

Devnagri Varanmala

देवनागरी वर्णमाला

Nine vowels

अ इ उ ऋ लृ ए ओ ऐ औ
आ ई ऊ

5 x 5 Varga consonants

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

Anthstha letters:

य् र् ल् व्

Ushmana letters:

श् स् ष् ह्

Yama letters

॰ ॱ ॲ ॳ ॴ ॵ ॶ ॷ

Table 9

Feature 3 Numbers alphabet (अङ्गसाम्नाय) Ank Samanaye

Devnagri Varanmala of letters and parallel numbers formats

देवनागरी (41) वर्णमाला (36)

$$[{\{(6+6+7+1+8+2+3+1+3+4=41), \\ (7+1+2+7+1+9+2+5+2=36)\}}; \\ 41+36=77]$$

Nine vowels

अ इ उ ऋ लृ ए ओ ऐ औ TCV (अ इ उ ऋ लृ ए ओ ऐ औ) =45
1 2 3 4 5 6 7 8 9 = 45 Class 1 letters = TCV 45

5 x 5 Varga consonants

क ख ग घ ङ 1 2 3 4 5 = TCV (क ख ग घ ङ) =15
च छ ज झ ञ 2 3 4 5 6 = TCV (च छ ज झ ञ) = 20
ट ठ ड ढ ण 3 4 5 6 7 = TCV (ट ठ ड ढ ण) =25
त थ द ध न 4 5 6 7 8 = TCV (त थ द ध न) =30
प फ ब भ म 5 6 7 8 9 = TCV (प फ ब भ म) =35
TOTAL TCV = 125 Class 2 letters = TCV 125

Anthstha letters:

य र ल व 1 3 5 7 = 16 = TCV (य र ल व)
Class 3 letters = TCV 16

Ushmana letters:

श स ष ह 2 3 6 9 = 20 = TCV (श स ष ह)
Class 4 letters = TCV 20

Yama letters

• ँ ः अ आ इ ई उ
9 10 11 12 13 14 15 16
Class 5 letters = TCV= 100

Grand summation value of TCV of formulation
Devnagri varanmala and its quadruple classes
= 77 + 45 + 125 + 16 + 20 = 283

Figure 1 sathapatya measuring rod

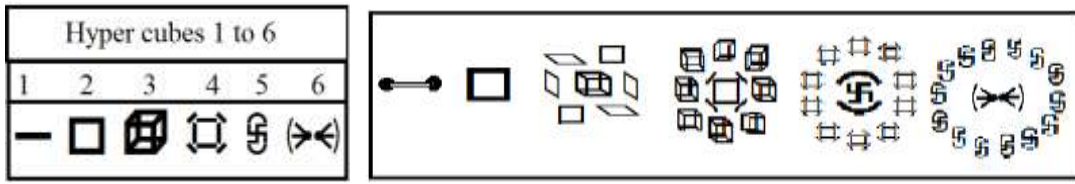


Figure 2

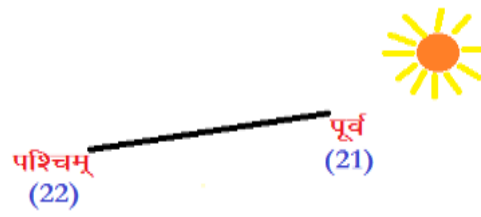


Figure 3, 4, 5, 6

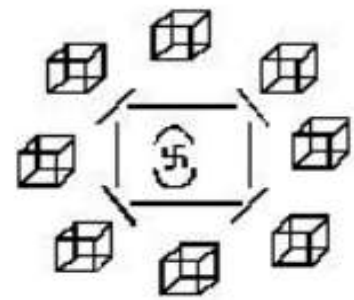


Figure 7

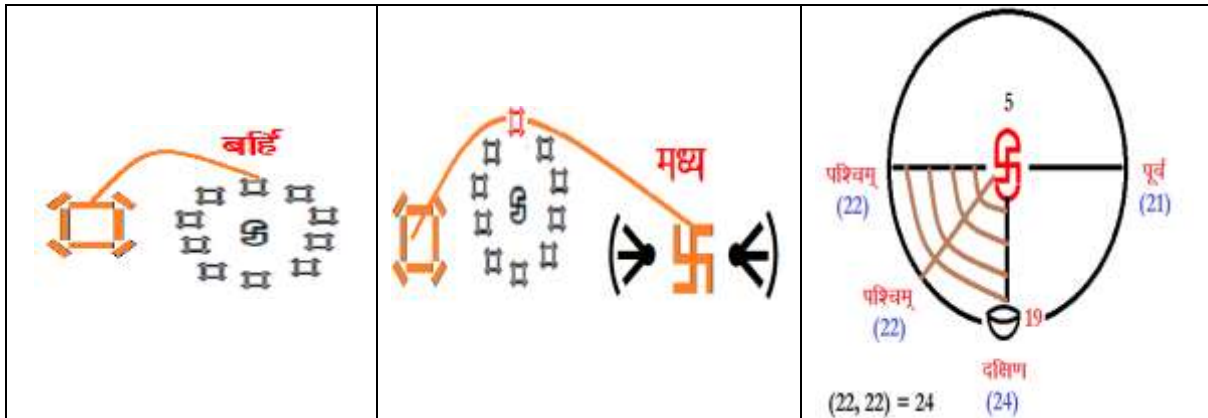


Figure 8 and 9

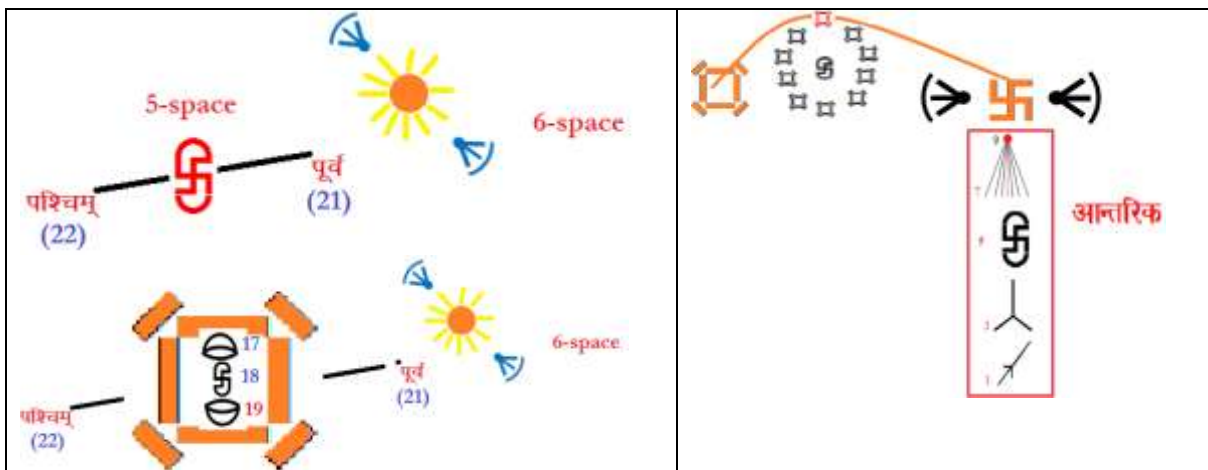


Figure 10

(ए) = 6
 6 = षट्
 (षट्) = 10
 10 = दश
 (दश) = 10 = 4 + 6



Figure 11

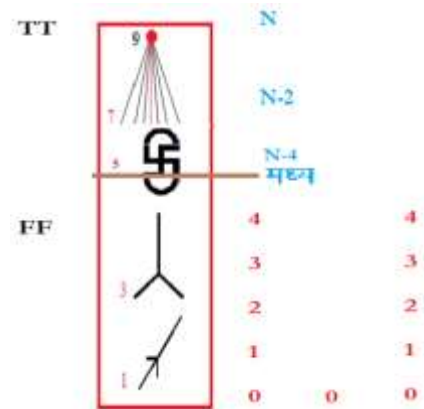
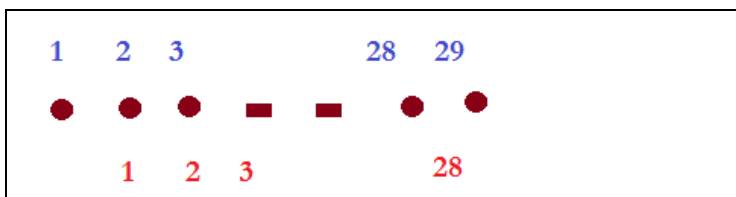
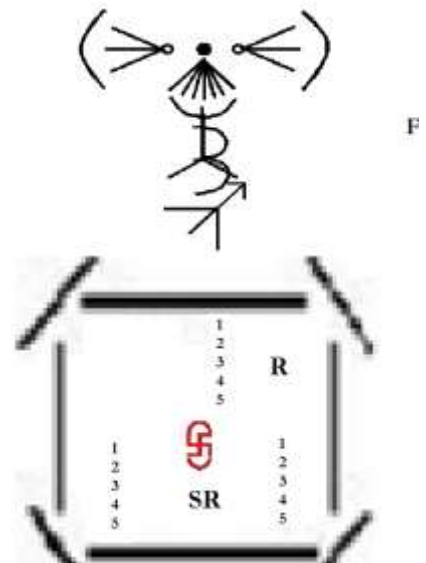


Figure 12

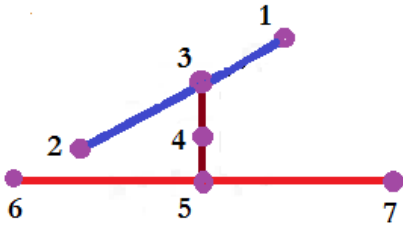
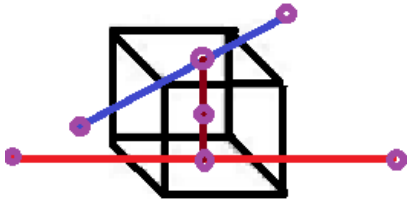


Figure 13



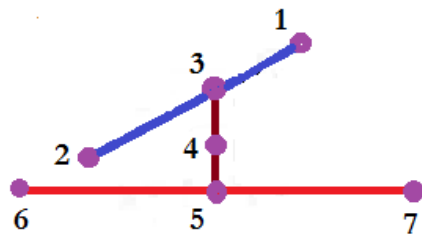
1 2 3 4 5

5556 57



1 2 3 4 5

5556 57



$57-7 = 50$

Organization format of Vedic Ganita Sutras Text & Mathematics


Dr. Sant Kumar Kapoor,

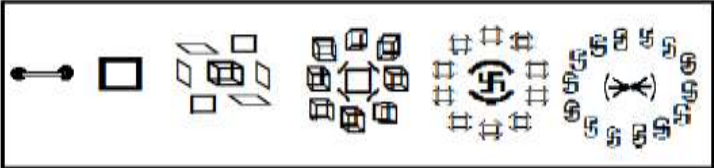
Ved Ratan

vedicganita@vedicganita.org

References Table

S. No	Reference point
1	<p>Vedic Ganita sutras (VGs) text⁽¹⁾</p> <p>The text as is reproduced and printed in book: Vedic Mathematics by Swami Bharti Krishna Tritya Ji Maharaj, published by Banaras Hindu University, is as under:</p> <p>1.1 Ganita Sutra</p> <p>(1) एकाधिकेन पूर्वेण। (2) निखिलं नवतश्चरमं दशतः। (3) ऊर्ध्वतिर्यग्भ्याम्। (4) परावर्त्य योजयेत्। (5) शून्यं साम्यसमुच्चये। (6) (आनुरूष्ये) शून्यमन्यत्। (7) संकलनव्यवकलनाभ्याम्। (8) पूरणापूरणाभ्याम्। (9) चलनकलनाभ्याम्। (10) यावदूनम्। (11) व्यष्टिसमष्टिः। (12) शेषाण्यङ्केन चरमेण। (13) सोपान्त्यद्वयमन्तम्। (14) एकन्यूनेन पूर्वेण। (15) गुणितसमुच्चयः। (16) गुणकसमुच्चयः।</p> <p>This text is a composition of 283 letters.</p> <p>1.2 Ganita Upsutra</p> <p>(1) आनुरूष्येण। (2) शिष्यते शेषसंज्ञः। (3) आघमाघेनान्त्यमन्त्येन। (4) केवलैः सप्तकं गुण्यात्। (5) वेष्टनम्। (6) यावदूनं तावदूनम्। (7) यावदूनं तावदूनीकृत्य वर्गं च योजयेत्। (8) अन्त्ययोर्दशकेऽपि। (9) अन्त्ययोरेव। (10) समुच्चयगुणितः। (11) लोपनस्थपनाभ्याम्। (12) विलोकनम्। (13) गुणितसमुच्चयः समुच्चयगुणितः।</p> <p>This text is a composition of 236 letters.</p>
2	<p><i>Devnagri</i>⁽²⁾ (DN).</p> <p>देवनागरी वर्णमाला</p> <p>Nine vowels स्वरः</p> <p>अ इ उ ऋ लृ ए ओ ऐ औ</p> <p>25 Varga consonants वर्गाः</p> <p>क् ख् ग् घ् ङ् च् छ् ज् झ् ञ् ट् ठ् ड् ढ् ण् त् थ् द् ध् न् प् फ् ब् भ् म्</p> <p>4 Anthsthaletters: अन्तःस्थ</p> <p>य् र् लृ व्</p>

	<p>4 Ushmana letters: उष्मण शू स् षू हू 8 Yamaletters यम</p> 
3	<p>Specific placements⁽³⁾</p> <p style="text-align: center;">देवनागरी वर्णमाला</p> <p>Nine vowels स्वरः 1 2 3 4 5 6 7 8 9</p> <p>5 x 5 Vargaconsonants वर्गाः 1 2 3 4 5 2 3 4 5 6 3 4 5 6 7 4 5 6 7 8 5 6 7 8 9</p> <p>Anthsthaletters: अन्तःस्थ 1 3 5 7</p> <p>Ushmana letters: उष्मण 2 3 6 9</p> <p>Yama letters यम 9 10 11 12 13 14 15 16</p>
4	<p><i>Sathapatya</i>⁽⁴⁾</p> <p>Sathapatya is the upved of athrav ved. Manasara is the scripture of sathapatya upved. The compilation of the text with English translation by Prasanna Kumar Acharya, is published by oriental books reprint corporation, 54-Rani Jhansi Road, New Delhi-110055.</p> <p>Chapter 2 shaloka 34 and 38 are about sathapatya measuring rod and measuring rope, and about their tutroly gods and about measure of measuring rod and measuring rope.</p> <p>References :- 1. Mansara 2.34 (II), 2.38 (I) By Prasanna Kumar Acharya, oriental books reprint corporation, 54-Rani Jhansi Road, New Delhi-110055</p> <p>हस्तदण्डाभयोः प्रोक्त (क्त) विष्णुमूर्त्य (तिर) धिदेवता ॥ 2.34 (II),</p>

	<p>Vishnu is stated to be tutelary god of (the wood (for) both the yard-stick and the (measuring) rod. - Mansara 2.34 (II),</p> <p>वासुकी रज्जुदेवात्मा मानतद्वज्रैः (तज्ज्ञः) पितामहाः (हः) । 2.38 (I),</p> <p>Vasuki (serpent-god) is the presiding deity of the measuring rope and Brahma is known as the presiding deity - Mansara 2.38 (I),</p>																		
5	<p>Characteristics⁽⁵⁾</p> <p>The Characteristics of sathapatya format of creations, including of human body, are of three folds (External, Middle & Internal), which have been elaborated by Upanshids, particularly the yoga upanshid and especially by mandal upanshid and Dishkanamurti upanshid.</p>																		
6	<p>External⁽⁶⁾,</p> <p>The formulation (बाह्य) is of placements value $(7+1+2+9+2) = 21$, which is parallel with placement value of (पूर्व) / east. Shad chakras are of external characteristics (2, 4, 6, 8, 10, 12) parallel with boundary components of sathapatya measuring rod (a synthetic set up of hyper cubes H1 to H6)</p> <p>Sathapatya measuring rod</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th colspan="6">Hyper cubes 1 to 6</th> </tr> <tr> <th>1</th> <th>2</th> <th>3</th> <th>4</th> <th>5</th> <th>6</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">—</td> <td style="text-align: center;">□</td> <td style="text-align: center;">◻</td> <td style="text-align: center;">◻</td> <td style="text-align: center;">◻</td> <td style="text-align: center;">◻</td> </tr> </tbody> </table> 	Hyper cubes 1 to 6						1	2	3	4	5	6	—	□	◻	◻	◻	◻
Hyper cubes 1 to 6																			
1	2	3	4	5	6														
—	□	◻	◻	◻	◻														
7	<p>Middle⁽⁷⁾</p> <p>Formulation (मध्य) is of placement values $9+1+7+1+1 = 19$, which is parallel with placement value of (मन) / mind. It is also parallel with placement values of formulation (अर्ध आकाश). Formulation (अर्ध) is of placement value 11 which is half of 22. the placement value of sathapatya.</p>																		
8	<p>Internal⁽⁸⁾.</p> <p>The formulation (आन्तरिक) is of placement values 22, which is double of (अर्ध) and is equal with sathapatya.</p>																		
9	<p>Vedic knowledge systems⁽⁹⁾</p>																		

	<p>The vedic knowledge systems are of sathapatya format of hyper cubes 1 to 6, as is the conclusion of doctorial thesis ‘Mathematical basis of vedic literature’ of Dr S K Kapoor. This thesis analysis in detail the vedic scripture: Shalkal Rig Ved Samhita, Adivalmki Ramayana, Urmahabhartam, Srimad Bhagwad Geeta, Sri Vishnushastranam Shotratriam, Srimad Durga Sapt Sati. Upanshids.</p> <ol style="list-style-type: none"> 1. Mandukyo Upanishad) (mantras 1 to 12) 2. Gaudpadas Karika’s) (chapters 1-4) 3. Taittriya Upanishad (chapters 8) 4. Isho Upanishad (Mantra 17) 5. Katho Upanishad (I.ii, 15, 16,17) 6. Mundakyo Upanishad (II.ii. 4, 6) 7. Prasno Upanishad (5th question and answer 1-7) 8. Chhandgo Upanishad (I.i.i. III. I.i, IV, 1.i) 9. Bharidarnyako Upanishad (1.3 23) 10. Shavetastro Upanishad (2.8) 11. Matrianyo Upanishad (5.4.5) 12. Atharvshiro Upanishad (mantra 4) 13. Shukrhyo Upanishad (2.8) 14. Pranvo Upanishad (1-13) 15. Brahmano Upanishad (mantra 1) 16. Brahmvidyo Upanishad (mantras 1-12, 39, 54, 55, 61, 69-72, 74, 76) 17. Kshukriko Upanishad (3, 4, 16, 22 (hans) 18. Yogtatvo Upanishad (39, 99, 100, 137-140) 19. Sabalo Upanishad (4.3, 72 x 10 nerves) 20. Mandalbrahmno Upanishad (1.2, 1.3, 2.1, 2.2, 4.1) 21. Hanso Upanishad (10-14) 22. Jablyo Upanishad (1-9) 23. Maitryo Upanishad (11) 24. Shadalyo Upanishad (sixth khanda) 25. Parbrahmo Upanishad (2.5) 26. Katharudro Upanishad (2) 27. Aruniyo Upanishad (5) 28. Sanyaso Upanishad (8) 29. Naradprivarjko Upanishad (4.37, Ashatmoupdesh) 30. Atambodho Upanishad (1) 31. Shatyayno Upanishad (16) 32. Yagvalvako Upanishad (4) 33. Paramhanparivarjgo Upanishad (3.4)
10	<i>Sathapatya format⁽¹⁰⁾.</i>

The conclusion of above thesis is that the mathematical basis of vedic literature is of sathapatya format, of features and characteristics as under:



11

Chatushpeet⁽¹¹⁾

Formulation (चतुष्टपीठ) is of placement value $2+1+4+3+6+5+4+4+1 = 30$.

It is parallel with placement value of (अर्धचन्द्र) / half moon, as well as of surya Rashmi (सूर्य रश्मि) / ray of the sun. it is also parallel with placement value of (रश्मि प्रकाश), (रश्मि क्रम) / (शब्द क्रम) / (नाद क्रम) / (द्रव्य यज्ञ) / (दिव्य यज्ञ)

It is further parallel with the summation value of four folds of hyper cube 7 (5, 6, 7, 8). The formulation (चन्द्र) is of placement value 19, which is parallel with the placement values of (अर्ध आकाश). and (अर्ध आकाश क्रम) goes parallel with Chatushpeet placement value 30.

Discreet points values ranges 1 to 30 as 29 gaps and 29 hymns as gap values make lively samhita of placement value 30 of Chatushpeet of our solar universe as lively phenomenon of surya rashmi (Ray of the Sun), as vedic mathematics of 29 hymns.

12	Creator ⁽¹²⁾ Vedic knowledge accepts (Brahma), the four heads lord as (सष्टि कर्ता)/ creator. The placement value of (सष्टि कर्ता) is 32 which is parallel with $8 \times 4 = 32$ coordinates fixation of solid boundary of 8 components of 4-space. There are 32 external devas and 13 internal devas.
13	<i>Brahma</i> ⁽¹³⁾ .
14	Titulory (God) ⁽¹⁴⁾
15	Measure ⁽¹⁵⁾
16	Sathapatya measuring rod ⁽¹⁶⁾
17	Rope ⁽¹⁷⁾ .
18	<i>Vishnu</i> ⁽¹⁸⁾
19	<i>Vashuki Naag</i> ⁽¹⁹⁾
20	283 letters ⁽²⁰⁾ ,
21	236 letters ⁽²¹⁾ .
22	36 distinct ⁽²²⁾ letters.
23	Vowel ⁽²³⁾ ,
24	Yama ⁽²⁴⁾ letter.
25	Alphabet ⁽²⁵⁾ ,
26	Numbers alphabet ⁽²⁶⁾ ,
27	Numbers text ⁽²⁷⁾
28	Sathapatya text ⁽²⁸⁾
29	Sankhiya ⁽²⁹⁾ Nishta
30	Yoga ⁽³⁰⁾ Nishta.
31	Mandal ⁽³¹⁾ upanshid
32	Dhakshna murti ⁽³²⁾ Upanshid.
33	Manifestations ⁽³³⁾
34	Uma ⁽³⁴⁾
35	Neelkanth ⁽³⁵⁾
36	Trilochan ⁽³⁶⁾
37	(Shiv ⁽³⁷⁾).
38	Solid order ⁽³⁸⁾
39	Spatial order ⁽³⁹⁾
40	Speaking language ⁽⁴⁰⁾
41	Tatterya ⁽⁴¹⁾ Upanshid
42	Flow ⁽⁴²⁾
43	Sentences ⁽⁴³⁾
44	Padas ⁽⁴⁴⁾
45	Sequential vartni ⁽⁴⁵⁾ (letters placements)
46	Ucharn ⁽⁴⁶⁾ / pronouncing
47	Divya ganga parvaha ⁽⁴⁷⁾
48	Bindu sarovar ⁽⁴⁸⁾
49	Seven Streams ⁽⁴⁹⁾
50	Components ⁽⁵⁰⁾
51	Sole syllable Om ⁽⁵¹⁾ .

Kamal Aasan⁽⁶⁵⁾

Kamal Aasan (lotus seat) of brahma is of eight petals. It is parallel with eight boundary components of hyper cube 4. The formulation Kamal (कमल) is of placement value 18 which is parallel with summation value of 4 folds, (3, 4, 5, 6) of hyper cube 5, as transcendental origin of 4-space. upanshids and principle purans well settles and preserve these values and features, kamal Aasan of lord Brahma.

Self referral⁽⁶⁶⁾

4-space is presided by lord Brahma, creator the supreme and as such 4-space is designated as creator's space.

5-space is presided by transcendental lord Shiv and as such 5-space is designated as transcendental space. 6-space is presided by self referral lord Vishnu and as such 6-space is designed as self referral space. 6-space is of creative dimensional order and is of spatial dimension of dimension as 4-space plays the role of dimension and 2-space plays the role of dimension of dimension. Upanshids and other vedic scriputres, particularly Vishnu puran settles and preserves these features and values of 6-space as self referral space.

Shiv: Transcendental domain formulation⁽⁶⁷⁾

Lord shiv, 5 head lord with 3 eyes in each head, is the over lord of transcendental domain (5-space content manifesting as 5-space domain of hyper cube 5, within 4-space). upanshids and other vedic scriptures, particularly shiv puran, elobratly settle the idol of lord Shiv of features parallel with the features of hyper cube 5 of four folds (3-space as dimension, 4-space as boundary, 5-space as domain and 6-space as origin).

Maheshwara⁽⁶⁸⁾ Sutras**MAHESHWARA SUTRAS WITH TCV**

S.N.	Sutra	TCV value	Total	Grand total
1.	अ इ उ ष्	(1, 2, 3) (7)	13	13
2.	ऋ लृ क्	(4, 5) (5)	14	27
3.	ए ओ ङ्.	(6, 7) 5	18	45
4.	ऐ औ च्	(8, 9) (2)	19	64
5.	ह य व र ट	(9, 1, 7, 3) (3)	23	87
6.	ल ष्	(5) (7)	12	99
7.	ज म ङ् ण न ष्	(6, 9, 5, 7, 8) (9)	44	143
8.	झ भ ञ	(5, 8) (6)	19	162
9.	घ ढ् ध ष्	(4, 6, 7) (6)	23	185
10.	ज ब ग ड द श्	(4, 7, 3, 5, 6) (2)	27	212

11.	ख फ छ ठ थ च ट त व्	(2, 6, 3, 4, 5, 2, 3, 4) (7)	36	248
12.	क प य	(1, 5) (1)	7	255
13.	श ष स र	(2, 6, 3) (3)	14	269
14.	ह ल्	(9) (5)	14	283

Note: Anubandh (क्) as (क् शिव) is of placement value 5

Gyatri Mantra⁽⁶⁹⁾

Gyatri Mantar

S N	Pada	Plac eme nt Valu e	Total
1	ओम्	16	16
2	भूर्भव	33	49
3	स्व	11	60
4	तत्	9	69
5	सवितुर्	23	92
6	वरेण्यम्	35	127
7	भर्गो	22	149
8	देवस्य	25	174
9	धीमहि	32	206
10	धियो	17	223
11	यो	8	231
12	नः	22	253
13	प्रचोदयात्	30	283

Note: VGS text is of 283 letters.

Gaps bridging values of Geeta⁽⁷⁰⁾

Gaps Bridging of Srimad Bhagwad Geeta

Chapter	Shalokas	Gap from previous	Total
1	47	31	31

2	72	25	56
3	43	29	85
4	39	1	86
5	29	13	99
6	47	18	117
7	30	17	134
8	28	2	136
9	34	6	142
10	42	8	150
11	55	13	163
12	20	35	198
13	34	14	212
14	27	7	219
15	20	7	226
16	24	4	230
17	28	4	234
18	78	50	284

Note: 284 = 283+1 is because of cyclic application which complete the circle by taking last chapter to the first chapter and joined adds unit value and the sutras continue to apply again.

71	Devnagri vowels and consonants ⁽⁷¹⁾	<p><u>Letter (वर्ण) Varan</u>, formulation (वर्ण) is of placement value (18), which is parallel with summation value of four folds of hyper cube 5, representative body of 5-space.</p> <p><u>Vowel (स्वर) swara</u> formulation (स्वर) is of placement value (15), which is parallel with the value of dimensional frame of five solid dimension of 5-space. further, values range 1 to 18 is of factors 1 to 33 = 18+15. It is this relationship of values pair (18, 15) which goes parallel with formulations pair (वर्ण and स्वर).</p> <p><u>Consonant (व्यञ्जन) vyanjan</u> formulation (व्यञ्जन) is of placement value (29), which is parallel with placement value of formulation Brahma (ब्रह्मा), creator the Supreme.</p>															
72	Mandukyo Upanshid ⁽⁷²⁾	<p>Mandukyo upanshid: it is athrav ved upanshid. It is a scripture of 12 mantras. It gives quarter by quarter parallel of 'Brahm (ब्रह्म), Aatma (आत्मा) and Om (ओम्)</p> <table border="1"> <thead> <tr> <th>(ओम्)</th> <th>(ब्रह्म)</th> <th>(आत्मा)</th> </tr> </thead> <tbody> <tr> <td>अ,</td> <td>1st pada</td> <td>1st pada</td> </tr> <tr> <td>उ</td> <td>2nd pada</td> <td>2nd pada</td> </tr> <tr> <td>म्</td> <td>3rd pada</td> <td>3rd pada</td> </tr> <tr> <td>(ओम्)</td> <td>4 pada</td> <td>4 pada</td> </tr> </tbody> </table>	(ओम्)	(ब्रह्म)	(आत्मा)	अ,	1 st pada	1 st pada	उ	2 nd pada	2 nd pada	म्	3 rd pada	3 rd pada	(ओम्)	4 pada	4 pada
(ओम्)	(ब्रह्म)	(आत्मा)															
अ,	1 st pada	1 st pada															
उ	2 nd pada	2 nd pada															
म्	3 rd pada	3 rd pada															
(ओम्)	4 pada	4 pada															
73	Factors of Numbers range 1 to 16	Vedic mathematics is mathematics of sankhiya nishta and yoga nishta. Sankhiya nishta avails values of															

		artifices of numbers. it takes to factors of numbers. numbers 1 to 16 lead to factors 1 to 29 = 16+13, and parallel to it is the organization of 16 sutras and 13 upsutras. There are 99 double digits numbers of ten place value system. Numbers 1 to 99 gives rise to 1 to 236 factors, which is parallel with 236 letters of text of Ganita upsutra.
74	Source sutra Ganita sutra-1	Ganita sutra-1 is the source sutra. It is composition of 16 letters. The first letter is sixth vowel of place value 6. It is a surya ank. It is first perfect number. It is unique perfect number as sum of proper divisors of 6 is equal to the product of proper divisor 6. No other perfect number has this property. The biggest proper divisor is '3', which is first odd prime. Further, (3-space as dimension takes uptill 6-space as origin of 5-space. value 6 as placement of first letter of Ganita sutra-1 becomes the structural key of Ganita sutra-1 itself and sequentially 2 to 16 th letter of Ganita sutra-1 become the structural keys of gantia sutras 2 to 16. These features of text of ganita sutras 1 make Ganita sutra-1 as the source sutra.

References :-

1. Mansara 2.34 (II), 2.38 (I)

By Prasanna Kumar Acharya, oriental books reprint corporation, 54-Rani Jhansi Road, New Delhi-110055

हस्तदण्डाभयोः प्रोक्त (क्त) विष्णुमूर्त्य (तिर) धिदेवता ॥ 2.34 (II),

Vishnu is stated to be tutelary god of (the wood (for) both the yard-stick and the (measuring) rod. - Mansara 2.34 (II),

वासुकी रज्जुदेवात्मा मानतद्भ्रैः (तज्जः) पितामहाः (हः) । 2.38 (I),

Vasuki (serpent-god) is the presiding deity of the measuring rope and Brahma is known as the presiding deity - Mansara 2.38 (I),

2. Srimad Bhagwad Geeta chapter 3 shaloka 3, chapter 5 shaloka 4 and 5

लोकेऽस्मिन् द्विविधा निष्ठा पुरा प्रोक्ता मयानघ ।

ज्ञानयोगेन सांख्यानं कर्मयोगेन योगिनाम् ॥3.3 Geeta ॥

*loke 'smin dvi-vidha nistha pura prokta mayanagha
jnana-yogena sankhyanam karma-yogena yoginam 3.3 Geeta ॥*

सांख्ययोगी पृथग् बालाः प्रवदन्ति न पण्डिताः ।

एकमप्यास्थितः सम्यगुभयोर्विन्दते फलम् ॥5.4 Geeta ॥

*sankhya-yogau prthag balah pravadanti na panditah
ekam apy asthitah samyag ubhayor vindate phalam 5.4 Geeta ॥*

यत् सांख्यैः प्राप्यते स्थानं तद् योगैरपि गम्यते ।

एकं सांख्यं च योगं च यः पश्यति स पश्यति ॥5.5 Geeta ॥

*yatsankhyaih prapyate sthanam tad yogair api gamyate
ekam sankhyam ca yogam ca yah pasyati sa pasyati 5.5 Geeta ॥*

3. Ganitachintamandi by Swami Nischalanand Saraswati, Sankracharya Goverdhana Peeta published by Sawasti parakashan Sansthan Srimaj Jagadguru Sankracharya Goverdhan math puri 1 Orissa.

अ० रहस्यधिगमन्याय / अक्षरा० साम्यन्याय (pages 31 to 44)

4. Upnishad

Organization format of Vedic Ganita Sutras Text & Mathematics

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Ved Ratan

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Vedic Ganita sutras and Upsutras (VGS) text⁽¹⁾

VGS text of 16 sutras is of 283 letters⁽²⁰⁾, while 13 upsutras are of 236 letters⁽²¹⁾. Of these 519 letters of VGS text, there are only 36 distinct⁽²²⁾ letters. The first letter is the sixth vowel⁽²³⁾, while the last letter, Visergania is the fifth yama⁽²⁴⁾ letter.

VGS text is in *Devnagri*⁽²⁾ (DN), which is a compactified format⁽³⁾ of five folds: (1) Letters format (2) Numbers format of specific placement numbers of letters in DN format (3) *sathapatya*⁽⁴⁾ external characteristics⁽⁵⁾ (4) middle characteristics⁽⁶⁾ and (5) internal characteristics⁽⁷⁾. The *sathapatya* format⁽⁸⁾ is of *Chatusheet*⁽⁹⁾ features of creator⁽¹⁰⁾ *Brahma*⁽¹¹⁾.

Transition from letters alphabet⁽¹²⁾ to numbers alphabet takes us from letters text of VGS to numbers text⁽¹³⁾ of VGS. Illustratively, the translation from letters text of VGS Sutra 1 to numbers alphabet comes to be :

Translation of letters text to numbers text

R1	ए	क्	आ	घ्	इ	क्	ए	न्	अ	प्	ऊ	र्	व्	ए	प्	अ
R2	6	4	2	7	2	4	6	8	1	5	6	3	7	6	7	1

Table 1

R1 = Letters of VGS Sutra 1, R2 = Placement values of letters

The transition from numbers text to Sathapatya text⁽¹⁴⁾ is to be in terms of parallel values of Sankhiya⁽¹⁵⁾ Nishta and Yoga⁽¹⁶⁾ Nishta:

R1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
R2	1S	2S	3S	4S	5S	6S	7S	8S	9S	10S	11S	12S	13S	14S	15S	16S

Table 2

R1 = Sankhiya (number), R2 = Yoga (Sathapatya), S = Space, NS = N space, N=1, 2, ---16.

Three folds of external⁽⁵⁾, middle⁽⁶⁾ and internal⁽⁷⁾ characteristics of sathapatya alphabet are as per the Upanshids settlement, particularly of Mandal⁽¹⁷⁾ upanshid and Dhakshna murti⁽¹⁸⁾ Upanshid. Illustratively the Sathapatya alphabet translation for the text of VGS Sutra 1 comes to be :

External characteristics (Boundary fold)

R1	6S	4S	2S	7S	2S	4S	6S	8S	1S	5S	6S	3S	7S	6S	7S	1S
R2	H6	H4	H2	H7	H2	H4	H6	H8	H1	H5	H6	H3	H7	H6	H7	H1
R3	12	8	4	14	4	8	12	16	2	10	12	6	14	12	14	2

Table 3

R1 = Sathapatya space, R2 = Space body, R3 = boundary components of space body.

Middle characteristics (Middle geometry)

R1	6S	4S	2S	7S	2S	4S	6S	8S	1S	5S	6S	3S	7S	6S	7S	1S
R2	H6	H4	H2	H7	H2	H4	H6	H8	H1	H5	H6	H3	H7	H6	H7	H1
R3	7	5	3	8	3	5	7	9	2	6	7	4	8	7	8	2

Table 4

R1 = Sathapatya space, R2 = Space body, R3 = middle geometry signature.

Internal characteristics (value of four folds of the body)

R1	6S	4S	2S	7S	2S	4S	6S	8S	1S	5S	6S	3S	7S	6S	7S	1S
R2	H6	H4	H2	H7	H2	H4	H6	H8	H1	H5	H6	H3	H7	H6	H7	H1
R3	22	18	6	26	6	18	22	30	2	18	22	10	26	22	26	2

Table 5

R1 = Sathapatya space, R2 = Space body, R3 = value of all four folds of the body.

Structural keys format of Ganita Sutra 1

Ganita Sutra 1 is the source sutra. Its first letter (ए), the sixth vowel, is the source letter. Its placement value 6 is of Sathapatya format of 6-space. 6-space content as 6-space domain of Hyper cube 6, body of 6-space in 4-space, is of domain split spectrum value (6, 4, 4, 2) of summation value 16. This makes structural keys format of Ganita Sutra 1 for mathematical domains of Ganita Sutra 1 to 16, as under :-

Letterwise structural keys of Ganita Sutras

Sutra	Serial number of Letter of Sutra 1 with TCV value			First letter of the corresponding Sutra			Structural keys Pair values of C4 and C7 as end values of structural keys format
C1	C2	C3	C4	C5	C6	C7	C8
	SN	letter	TCV	Ganita Sutra	First Letter	TCV	
1	1	ए	6	1	ए	6	(6, 6)
2	2	क्	4	2	न	8	(4, 8), (4, 5, 6, 7, 8)
3	3	आ	2	3	ऊ	6	(2, 6), (2, 3, 4, 5, 6)
4	4	ध्	7	4	प्	5	(7, 5), (7, 6, 5)
5	5	इ	2	5	श्	2	(2, 2)
6	6	क्	4	6	आ	2	(4, 2), (4, 3, 2)

7	7	ए	6	7	स्	3	(6, 3), (6, 5, 4, 3)
8	8	न्	8	8	प्	5	(8, 5), (8, 7, 6, 5)
9	9	अ	1	9	च्	2	(1, 2)
10	10	प्	5	10	य्	1	(5, 1), (5, 4, 3, 2, 1)
11	11	ऊ	6	11	व्	7	(6, 7)
12	12	ँ / र्	3	12	श्	2	(3, 2)
13	13	व्	7	13	स्	3	(7, 3), (7, 6, 5, 4, 3)
14	14	ए	6	14	ए	6	(6, 6)
15	15	ण्	7	15	ग्	3	(7, 3), (7, 6, 5, 4, 3)
16	16	अ	1	16	ग्	3	(1, 3), (1, 2, 3)

Table 6

Sathapatya formats of structural keys of Ganita Sutras

Sutra				
C1	C4	C7	C8	C9
	TCV	TCV	Structural key	Sathapatya format
1	6	6	(6, 6)	Self referral Sathapatya format for 6-space
2	4	8	(4, 5, 6, 7, 8)	Transcendence Range order 4
3	2	6	(2, 3, 4, 5, 6)	Transcendence Range order 2
4	7	5	(7, 6, 5)	Transcendence flow 7 to 5
5	2	2	(2, 2)	Karam Samapati format (interval and square within square)
6	4	2	(4, 3, 2)	Transcendence flow 4 to 2
7	6	3	(6, 5, 4, 3)	Hyper cube 5 in reverse orientation
8	8	5	(8, 7, 6, 5)	Hyper cube 7 in reverse orientation
9	1	2	(1, 2)	Sequential pairing format
10	5	1	(5, 4, 3, 2, 1)	Transcendence range order 1
11	6	7	(6, 7)	Enveloped domain 7

12	3	2		Enveloped domain 3
13	7	3	(7, 6, 5, 4, 3)	Transcendence range order 3 in reverse orientation
14	6	6	(6, 6)	Self referral Sathapatya format for 6-space
15	7	3	(7, 6, 5, 4, 3)	Transcendence range order 3 in reverse orientation
16	1	3	(1, 2, 3)	Transcendence from 3 to 1 in reverse orientation

Table 7

Integrated format of VGS

Ganita Sutras and Upsutras are of integrated Sathapatya format of creator's space (4-space). Number value (16 + 13 = 29) is parallel with placement value of formulation (ब्रह्मा). The numbers range 1 to 16 is of 1 to 29 factors. Further, value 29 is parallel with 29 gaps of 30 discrete points. Value 30 is parallel with placement value of formulation चतुषपीठ. These features lead to integrated Sathapatya format of Ganita Upsutras bridging the gaps of consecutive Sutras, making it as (आदि चक्र) Aadi Chakra, of placement value 16, of structural key of Ganita Sutra 2, as follows :-

Aadi Chakra (initial existence cycle) of Ganita Sutra 2

Aadi Chakra (beginning cycle)

SN	Sutra	Upsutra	Number of letters	Word
1	1		16	आदिचक्र
2		1	10	शक्ति
3	2		28	ब्रह्म
4		2	18	प्रकृति
5	3		15	तेज
6		3	23	अंहकार
7	4		17	आत्मा
8		4	21	शिवालय
9	5		20	श्रीः
10		5	08	आकाश

11	6		19	अमृत
12		6	18	विद्या
13	7		24	पुरुष
14		7	37	श्रीभगवान
15	8		16	जीव
16	9		16	प्राण
17		8	16	बीजू
18	10		09	काल
19		9	11	यजु
20	11		14	रज्जु
21		10	16	गायत्री
22	12		20	देव
23		11	17	दिव्य
24	13		20	वेद
25		12	09	राग
26	14		17	द्रव्य
27		13	32	जर्नादन
28	15		16	ओम्
29	16		16	ॐ

Table 8

Chatushpeet format of creations

VGS as well as DN are the basis base of Vedic knowledge systems, which are parallel with Chatushpeet format of creations. Chatushpeet is of transcendental origin. It is a seat of Uma⁽³⁴⁾ and Neelkanth⁽³⁵⁾. Of solid order⁽³⁶⁾ of transcendental origin⁽³⁷⁾, the first axis manifests external characteristics. The second and third axes, respectively manifest middle and internal characteristics. The transcendental origin seat being within spatial order⁽³⁸⁾ of Chatushpeet, as such axes of solid order manifested values are of spatial format⁽³⁹⁾.

Sathapatya features of origin of Chatushpeet

Origin of Chatushpeet is 'transcendental of solid order⁽⁴⁰⁾'. The transcendental domain is enveloped within creative boundary⁽⁴¹⁾ of ten components, of classified organization of 4 and 6 components, as:

6 = षट् and placement value for (षट्) = 10 = दश. Further, the placement value for (दश) is 10.

This as such, makes basis base for organization of ten components boundary as of two parts (4, 6). Parallel to it, are four phases and six folds of sathapatya.

Four phases of shabdh⁽⁴²⁾ are:

- (v) Shabdh / word as wholesome format,
- (vi) Akshar⁽⁴³⁾ / syllables / vowels of the Shabdh (Word),
- (vii) Varan⁽⁴⁴⁾ / letters of the Shabdh (Word) and
- (viii) Placement values of letters of the Shabdh (Word).

Six folds of sathapatya format are parallel to spatial format for triple axes of the solid order of the transcendental origin of the Chatushpeet.

Features of Four phases and six folds of sathapatya

Sathapatya phase-1

First phase is parallel with the wholesome value of sathapatya format of Shabdh of Akash⁽⁴⁵⁾ placement. The placement value of Akash is '8', which is parallel with placement value of Ek (one). As such the manifested value of first phase becomes '1'.

Sathapatya phase-2, 3 & 4

Second, third and fourth phases of sathapatya format are parallel with, the external, middle and internal characteristics, which together make six folds.

Sathapatya phase 2 folds 1 and 2

Phase 2 of sathapatya is number of syllables / vowels of shabdh (word). Parallel to it are folds 1 and 2 of features of first axis of solid order of transcendental origin. These features are of characteristics of *varttni*⁽⁴⁶⁾ (sequential placements of letters as fold 1) and *uccharan*⁽⁴⁷⁾ (pronouncing frequencies of the letters as fold 2).

Manifested value of fold 1

The first fold manifests the transcendence flow⁽⁴⁸⁾ through vowels as dimensional frame of value 'N x (N-2) N-4' for vowel N as N domain⁽⁴⁹⁾ of N-2 dimension⁽⁵⁰⁾ and (N-4) dimension of dimension⁽⁵¹⁾. Letter(s) of placement value V before vowel N, of syllable, will make transcendence flow as manifested value of fold 1 as: 'V (V-2) V-4'

Manifested value of fold 2

The second fold manifests Uccharan⁽⁵²⁾ / pronouncing frequency for each letter as placement value of the letter plus 20 of (Karah), for all letters except Raif⁽⁵³⁾. The addition value for Raif is '12'.

Sathapatya phase 3, folds 3 and 4

Phase 3 is of features of 'number of letters' of the Shabd word. Parallel to it are folds 3 and 4 of features of second axis of solid order of transcendental origin. These features are of characteristics of Pada⁽⁵⁴⁾ formulation of placement value of letter of Shabd and pada arth satta⁽⁵⁵⁾ (numbers values of the letters of the word as sathapatya body⁽⁵⁶⁾ formats).

Manifested value of fold 3

The numbers values 1 to 9 and 13 manifest word formulations of placement values table-1 as under:

R1	1	2	3	4	5	6	7	8	9	13
R2	एक	द्वय	त्रय	चतुर्	पञ्च	षट्	सप्त	अष्ट	नव	त्रयोदश
R3	8	16	8	12	15	10	14	11	17	24

Table-9

R1 = Number value, R2 = Word formulation, R3 = Placement value of word formulation.

Manifested value of fold 4

The numbers values 1 to 9 and 13 manifest sathapatya bodies H_N of four folds of summation values table-2 as under:

Number value	Sathapatya body			Sum of four folds						
H _N	N-2, N-1, N, N+1			4N-2			N = 1-9, 13			
R1	1	2	3	4	5	6	7	8	9	13
R2	1-s	2-s	3-s	4-s	5-s	6-s	7-s	8-s	9-s	13-s
R3	H ₁	H ₂	H ₃	H ₄	H ₅	H ₆	H ₇	H ₈	H ₉	H ₁₃
R3	2	6	10	14	18	22	26	30	34	50

Table-10

R₁ = Number value, R₂ = N-space, N = 1, 2, 3,, R₃ = N-space body, R₄ = sum of four folds of N space body N = 1, 2, 3,,

Sathapatya phase 4, folds 5 and 6

Phase 4 is of Vakaya-pankti⁽⁵⁷⁾ (sentence arth parvaha / transcendental content flow manifestation of the order of the value of the letter of the word, and sany vakaya-pankti sanyog⁽⁵⁸⁾ / transcendental content synthesis of flow manifestation of a pair of streams of same order⁽⁵⁹⁾).

Manifested value of fold 5

The number value of fold 5, for number value N, is the summation value of 5 steps long transcendental flow (N, N+1, N+2, N+3, N+4) is $5N+10$, for N = 1 to 9, 13.

Manifested value of fold 6

The manifested value of fold 6, for pair of transcendental flow streams of order N, is:

$$(5N+10)+N+(5N+10) = 11N+20, N = 1 \text{ to } 9, 13.$$

Consolidated table

The consolidated table of manifested values of sathapatya phases and folds is as under:

Phase	Sathapatya format	Phase folds	Manifested value of phase fold
Phase 1 (Word)	Wholesome feature of solid order	Wholesome state	One
Phase 2 (Syllables / Vowels)	External axis features of solid order	fold 1 fold 2	Number of vowels Number of letters
Phase 3 (Letters)	Middle axis features of solid order	fold 3 fold 4	Table-1 Table-2
Phase 4 letters Placement values	Internal axis features of solid order	fold 5 fold 6	$5N+10$ $11N+20$

Table 11

Shiv: transcendental domain formulation⁽⁶⁷⁾

Formulation Shiv is of sathapatya four phases and six folds manifested values as under:

Phase-1	शिव	1	1
Phase-2	शि व	2	3
Phase-3	श इ व अ	4	7
Phase-4	2, 2, 7, 1	12	19
Fold-1	शि व $2 \times 0 + 7 \times 3$	21	21
Fold-2	$2+20, 2+20,$ $7+20, 1+20$	92	113
Fold-3	16, 16, 14, 8	54	167
Fold-4	6, 6, 26, 2	40	207
Fold-5	20, 20, 45, 15	100	307
Fold-6	42, 42, 97, 31	212	519

Table-12

Maheshwara⁽⁶⁸⁾ Sutras

Maheshwara sutras are 14. These sutras coordinate vowels and consonants of devnagri. The placement values table of letters of these sutras sum up 283, precisely parallel with 283 letters of 16 Ganita Sutras:

Gyatri Mantra⁽⁶⁹⁾

Formulation Gyatri (गायत्री) is of placement value $3+2+1+1+4+1+4 = 16$. Gyatri mantra is a composition of 13 words. The placement values of letters of these 13 words, as well precisely is 283, parallel with 16 ganita sutras.

Gaps bridging values of Geeta⁽⁷⁰⁾

Text of Geeta is of 18 chapters of Shalokas (47, 72, 43, 42, 29, 30, 28, 34, 42, 55, 20, 34, 27, 20, 24, 28, 78). Their gap values are (29, 25, 1, 13, 1, 2, 6, 8, 13, 35, 14, 7, 7, 4, 4, 50, 31) of summation value 284, one more than 283, number of letters of 16 Ganita Sutras.

Mandukyo Upanshid⁽⁷²⁾

Mandukyo upanshid unfolds formulation Aum as (A, U, M and AUM) parallel with four quarters of Brahm as well as of Aatma. The placement value of these quadruples quarters is (1, 3, 9, 16) which for first three quarter as $1+3+9 = 13$ and of fourth quarter as 16 is parallel with upsutras being 13 and sutras being 16.

Vedic Ganit Sutras Mathematics

Numbers values formulations

VGS text is having formulations for values (0, 1, 2, 7, 9, 10). The values (3, 4, 5, 6, 8) out of the range 0 to 10 are not, as such not part of the VGS text.

Values (0, 1, 2, 7, 9, 10) make foundation for VGS mathematics. And, values (3, 4, 5, 6, 8) make foundation for organization features of VGS text.

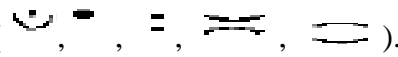
The summation value of values (0, 1, 2, 7, 9, 10) = 29 is parallel with the 29 hymns (16 sutras and 13 upsutras). While the summation value of values (3, 4, 5, 6, 8) = 26 is parallel with placement values of formulation sopen, as well as of devta.

The values pair (26, 29) is end pair of quadruple values (26, 27, 28, 29) of four folds of hyper cube 28

Six is the first perfect number while twenty eight is the second perfect number. This makes a reach from value 6 as placement value of the first letter (6th vowel) of VGS text to value 28 as placement value of formulation Brahm.

With it,

- (1) Vedic mathematics (VGS mathematics) is of the range: Surya (Sun) to Brahm (Eternity).
- (2) Surya rashmi (ray of the sun) is of placement value $13+17 = 30$, is the placement value of Chatusheet,
- (3) formulation (chatusheet is of placement value 30 which is also parallel to summation value of four folds of hyper cube 8,

- (4) the represented regular body of 8-space (asht prakarti).
- (5) Values range (0, 1, 2, 7, 9, 10) of summation value 29 is parallel with 29 reflection pairs of upper part of 9x11 grid of double digit numbers of ten place value system.
- (6) The summation of values pair (29, 26) = 55 of first placement value of mirror line (55, 66, 77, 88, 99) of lower part of the grid 9x11.
- (7) The upper part of the grid 9 x 11 manifests integrated format of 16 sutras and 13 upsutras.
- (8) The upper and lower parts of grid 9x11 manifests VGS mathematics of Chatuspeet of transcendental origin.
- (9) Chatuspeet as Surya rashmi manifests surya parkash.
- (10) Rashmi flourishes within jyoti and *man* flourishes as jyotir as the transcendental domain of VGS mathematics of the Chatuspeet.
- (11) With it, stands settled placements values format for sapt bhumi (7-space) / Dhru / pole star as a bridge between surya (6-space) and Asht prakarti (8-space) as of $13 \times 4 = 52$ phases parallel with 4-space as dimension for 13 geometries of 6-space of 13 versions of hyper cube 6 as bodies of 13 geometries of 6-space.
- (12) These 52 phases of placement values are:
- (vii) 14 vowels as 14 manu (of format of 14 components of self referral boundary / 6-space as boundary of 7-space),
 - (viii) First 12 consonants as 12 adityas (of format of 12 components of transcendental boundary / 5-space as boundary of 6-space),
 - (ix) Next 11 consonants as 11 rudras (of format of 11 versions of hyper cube 5),
 - (x) 8 consonants as 8 vashu (of format of 8 components of solid boundary of 4-space),
 - (xi) And last 2 consonants as ashwin kumar (of the format of spatial dimension of creator's space / 4-space / Chatuspeet).
 - (xii) Five yama are matrikas ().
- (13) It brings to surface the unique processing process of Vedic Mathematics of Ganita Sutras as that Vedic Mathematical domain (Vedic Ganit Sopan Mandal), the same is to be of a pair of complementary and supplementary parts, as is here (0, 1, 2, 7, 9, 10) and (3, 4, 5, 6, 8), and first part, as a foundation, is to be availed to process out the second part, and also the second part as a foundation, the first part is to be processed on this foundation of second part.
- (14) The first part as of values (0, 1, 2, 7, 9, 10) of summation value 29 is parallel with the placement value of Brahma.
- (15) The second part as of values (3, 4, 5, 6, 8) is of summation value 26 parallel with the four folds of Hyper cube 7, of format of pole star as origin of solar universe (6 space domain).
- (16) formulation (बाह्) is of placement value 19 which is parallel with placement value of Akash karam (space sequence).
- (17) formulation (मध्य) is of placement value 19 which is parallel with placement value of Ardha Akash (अर्ध आकाश) (half space).

(18) formulation (आंतरिक) is of placement value 22 which is parallel with placement value of Akash Satta (आकाश सत्ता) (space format).

(19) Ardha Akash manifests Sathapatya bodies of half units.

(20) Spatial order of creator's space (4-space) manifests full unit as well as half unit Sathapatya bodies.

(21) The placement of origin at Madhya, as such makes it a place of dual manifestation, of full unit (H_N) as well as of half unit (h_N).

(22) $(H_N+h_N) = (4N-2)+(4N-1) = 8N-3$, $N = (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)$ makes origins of space 1 to space 10 as of manifested values (5, 13, 21, 29, 37, 45, 53, 61, 69 and 77).

Space	Origin	Sathapatya format	Origin value	Parallel formulation
1	2-space	$H1 + h1$	2+3	यश (शिव)
2	3-space	$H2 + h2$	6+7	यज्ञ (सूर्य)
3	4-space	$H3 + h3$	10+11	नारद
4	5-space	$H4 + h4$	14+15	ब्रह्मा
5	6-space	$H5 + h5$	18+19	श्रीभगवान्
6	7-space	$H6 + h6$	22+23	नवब्रह्म
7	8-space	$H7 + h7$	26+27	अर्धब्रह्मसत्ता
8	9-space	$H8 + h8$	30+31	पूरणापूरणसत्ता
9	10-space	$H9 + h9$	34+35	अदित्यमंडलपुरुष
10	11-space	$H10 + h10$	38+39	देवनागरी वर्णमाला

(23) Value 21 as origin value of 3-space is parallel with placement value of Narad नारद, who had shared enlightenment values of Ramayana to Valmiki rishi.

(24) Value 29 as origin value of 4-space is parallel with placement value of Brahma ब्रह्मा, who had, after Narad, shared enlightenment values of Ramayana Valmiki rishi.

(25) Value 69 as origin of 9-space is the enlightenment of Mandal Upnishad shared by Aditya Mandal Pursha with Yajvalakaya.

(26) Value 77 as origin of 10-space is parallel with the placement value of Devnagri varanmala.

(27) Devnagri varanmala as origin of 10-space, is of potentialities to preserve the source value of Vedic Ganita Mandal.

(28) Braham (28) as dimension manifests Samhita (30) as domain. Numbers range 1 to 28 is of factors 1 to $56 = 28 + 28$, while numbers range 1 to 30 is of factors 1 to $60 = 30 + 30$.

*

Organization format features of text of Ganita Sutras and Upsutras

Dr. S.K. Kapoor

Abstract

Two basic poser's about Vedic Ganita Sutras and Upsutras¹ are, firstly, as to their vedic source and secondly, regarding their mathematical potentialities. As the original vedic text from which BKT² copied VGS³ text is not traceable yet, as such we have to depend upon the organization format features of this VGS text to evaluate and appreciate if the same deserves to be a member of Vedic family scriptures, with source scripture being Shakala Rigved Samhita of ten mandals, and Mandalounpnishad preserves the values format of bhair (external), madey (middle) and antrik (inward) flow features. Further about mathematics potentialities of these Sutras, as well, we have to go to the shelter of the organization format features and structural keys are provided by this text. Each system is to be approached, the system way. BKT has demonstrated that the Vedic system is of Transcendental meditation format and as such by approaching Ganita Sutras the Vedic way, we will be face to face with the blissful potentialities reach of Ganita Sutras. The present paper, being the first of its nature, the same as such has its inherent constraints but despite that the structural data which could be laid hand at, is helping reach at positive conclusion regarding vedic source as well as the potentialities being indicated by BKT. Ganita Sutras organization format features are parallel with the Vedic family scriptures. There potentialities as well are of the order of Vedas.

Text table 6 Ganita Sutras text

Initial structural data features

The VGS text is in Devnagri script. It avails 283 letters for 16 Sutras and 236 letters for Upsutras. However, there are only following 36 distinct letters of Devnagri alphabet being availed here:-

Feature 1 36 Distinct letters of text

Table 7 distinct 36 letters

Table 8 devnagri alphabet

Feature 2 Compactified format of DA

Parallel with letters alphabet format (Akshar Samvanaye अक्षरसाम्न्वाय) there is a parallel अङ्कसाम्नाय) Ank Samanaye (numbers alphabet). The parallel format features and values of Sankhiya Nishtha (संख्या निष्ठा) and Yoga Nishtha (योग निष्ठा) make compactified format of Devnagri alphabet being of five folds (Panchvritya) (पञ्चवृत्तय), namely letters alphabet, numbers alphabet, sathapatya (geometric) alphabet and of content flow format (Divya Ganga Parvah) (दिव्यगङ्गा प्रवाह) and manifestation format (मूर्तिमान सत्ता).

Table 9 Devnagri with TCV values

Sathapatya (geometric) format

Upnishads⁽¹⁾ values are the essence of Vedas. Upnishads put sadkhas on the format of three folds features (1) बर्हिलक्षण / external (2) मध्यलक्षण / middle and (3) आन्तरिकलक्षण / internal. Mansara⁽²⁾, scripture of Sathapatya upved of Atharavved, preserves that Vishnu is the presiding deity of measuring rod, Vasuki Nag is presiding deity of measuring rope (रज्जु), while Brahma is the presiding deity of measurement.

External features (बर्हिलक्षण)

Figure 1 sathapatya measuring rod

The external characteristics of shad chakras are (2, 4, 6, 8, 10, 12) parallel to the boundary components of Hyper cubes 1 to 6 synthesizing Sathapatya measuring rod presided by Vishnu. Brahma is the presiding deity of measurements.

Figure 2

Formulation (बहि-लक्षण) is of TCV 21 + 22. The values pair (21, 22) is parallel with the TCV values pair of pair of formulations (पूर्व, पश्चिम्) / east, west.

Four head lord Brahma is the overlord of 4-space. lord Brahma meditates within cavity of his own heart and with grace of Transcendental lord Shiv, Brahma multiplies as ten Brahmas in Shiv lok.

Figure 3, 4, 5, 6

Along Sathapatya format, this amounts to transition from 4-space as domain to 4-space as boundary of 10 components of 5-space.

Sequentially the transition ahead is from 4-space as boundary of 5-space to 4-space as dimension of 6-space.

Figure 7

It is the reach at middle (मध्य), and step ahead the transition is going to be within 6-space and it is going to be of inward (आन्तरिक) transition features.

figure 8 and 9

$$A^5:10B^4$$

Ganita Sutra 1 : Source feature

Figure 10

Ganita Sutra 1 is the source Sutra. Its first letter (ए) = 6 = षट् and (षट्) = 10 = दश and (दश) = 10. And 10 = 4 + 6 organizes boundary $10B^4$ of A^5 of two parts of four boundary components and 6 boundary components. Parallel to it, there happens two phases of 10 folds, of four folds and six folds respectively. The first phase of four folds manifest as शब्द word (in short **W**), अक्षर syllable (in short **S**), वर्ण letter (in short **L**) and दिव्य अंक Transcendental placement number / Transcendental code value (in short **T**). The second phase six folds manifests as triple pairs of folds, respectively being parallel to

(1) बर्हि-लक्षण, (external features) / as

Figure 11

- c. वर्त्तनि Transcendental Transcendence through dimension and dimension of dimension (in short **TT**)
- d. उच्चारण / formulations pronouncing frequencies (in short **FF**)

(2) मध्यलक्षण (middle features) and

- c. पद formulation / (in short **F**)
- d. अर्थ formulations yogic / geometric format / (in short **H**)

figure 12

(3) आन्तरिकलक्षण (internal features).

- c. वाक्य values flow range / (in short **R**)
- d. भाव संयोग values flow ranges synthesis (in short **SR**)

Figure 13

Ganita Sutra 2 source feature

Ganita Sutra 2 text is a composition of three words formulation of TCV values triple (28, 50, 29) which on its chase in the light of the triple folds ((1) बर्हिलक्षण / external (2) मध्यलक्षण / middle and (3) आन्तरिकलक्षण / internal.) preserve in Mandal Upnishad bring us face to face with the following phases and stages of such organization :-

(1) values pair (28, 29) as of the format of 28 gaps of 29 points range	Figure 14
(2) This organization of set up of discrete points range along with gaps makes a set up of $(28 + 29) = 57$ structural components set up.	Figure 15
(3) The distinct generic pair of structural components set up is there because of distinct dimensional orders (here, 0 order of 2-space) and (1 order of 3-space) makes a manifestation of spatial order 4	Figure 16

space and solid order 5-space. This manifestation as of external, middle and internal features, brings in 7 points sustaining support.	
(4) Accordingly the set up of structural components of distinct generic structures, in addition to the sustenance support 7 components, comes to be of $57 - 7 = 50$ components.	Figure 17

Sum up and Conclusion

Shakala Rigved Samhita is the source scripture. It is organized as ten mandals. The formulation mandal gives rise to its first four folds of value 40 and of its next six folds being of value 1108 which is parallel with the TCV values of Ganita Sutras 1107 and same as a cyclic system beginning with rule one more than before of Ganita Sutra 1 makes it $1107 + 1 = 1108$. Transcendental formulation 'Shiv' gives rise to its first four folds of value 19 and its next six folds being of value 519 which is parallel with the total letters of complete text of 16 Ganita Sutras and 13 Ganita Upsutras. Further Maheshwara Sutras lead us to TCV value 283 which is parallel with total letters of the text of Ganita Sutras. The gap values of 18 punctuations (chapters) of Divine Dialogue of Geeta sum up value 284 which is one more than 283, the total letters of the text of Ganita Sutras. The quadruple quarters organization of formulation AUM as (अ, उ, ऋ, ओम्) is of values format (1+ 3+ 9, 16) which is parallel with the organization features of 16 Sutras and 13 Upsutras. The values range 1 to 16 is of factors 1 to 29 and $29 = 16 + 13$ brings to focus principal value 16 and additional factors 13 parallel with the feature of 16 Sutras and 13 Upsutras. These features lead us for the sum up and conclusion for acceptance of Ganita Sutras and upsutras being a scripture of Vedic scriptures family. The

structural keys lively within the text of 16 letters in the sequential order of 16 Sutras, together with the Aadi chakra values of integrated format of 16 Sutras and 13 Upsutras together, as such further lead us for the sum up and conclusion for acceptance of potentialities of the Ganita Sutras and Upsutras mathematics being of basis base values of Vedic knowledge. The value $16 + 13 = 29$ being parallel with TCV (ब्रह्मा), creator the supreme, a four head lord and presiding deity of measures is the blissful value and feature which brings in Shradha (श्रद्धा) / faith and nishtha (निष्ठा) / conviction in favour of source and potentialities being the 'Vedic Ganita Sutras' of order of Vedic knowledge systems. ■

Structural keys format of Ganita Sutra 1

Table 1

Structural keys of Ganita Sutras table A

Sutra	Serial number of Letter of Sutra 1 with TCV value			First letter of the corresponding Sutra			Structural keys Pair values of C4 and C7 as end values of structural keys format
	C1	C2	C3	C4	C5	C6	
	SN	letter	TCV	Ganita Sutra	First Letter	TCV	
1	1	ए	6	1	ए	6	(6, 6)
2	2	क्	4	2	न	8	(4, 8) (4, 5, 6, 7, 8)
3	3	आ	2	3	ऊ	6	(2, 6) (2, 3, 4, 5, 6)
4	4	घ्	7	4	प्	5	(7, 5) (7, 6, 5)
5	5	इ	2	5	श्	2	(2, 2)
6	6	क्	4	6	आ	2	(4, 2) (4, 3, 2)
7	7	ए	6	7	स्	3	(6, 3) (6, 5, 4, 3)
8	8	च्	8	8	प्	5	(8, 5) (8, 7, 6, 5)
9	9	अ	1	9	च्	2	(1, 2)
10	10	प्	5	10	प्	1	(5, 1) (5, 4, 3, 2, 1)
11	11	ऊ	6	11	व्	7	(6, 7)
12	12	ँ / र्	3	12	श्	2	(3, 2)
13	13	व्	7	13	स्	3	(7, 3) (7, 6, 5, 4, 3)
14	14	ए	6	14	ए	6	(6, 6)
15	15	प्	7	15	ग्	3	(7, 3) (7, 6, 5, 4, 3)

16	16	अ	1	16	३	3	(1, 3) (1, 2, 3)
----	----	---	---	----	---	---	---------------------

Table 2

Structural keys of Ganita Sutras **table B**
Structural keys Sathapatya formats

Sutra				
C1	C4	C7	C8	C9
	TCV	TCV	Structural key	Sathapatya format
1	6	6	(6, 6)	Self referral Sathapatya format for 6-space
2	4	8	(4, 5, 6, 7, 8)	Transcendence Range order 4
3	2	6	(2, 3, 4, 5, 6)	Transcendence Range order 2
4	7	5	(7, 6, 5)	Transcendence flow 7 to 5
5	2	2	(2, 2)	Karam Samapati format (interval and square within square)
6	4	2	(4, 3, 2)	Transcendence flow 4 to 2
7	6	3	(6, 5, 4, 3)	Hyper cube 5 in reverse orientation
8	8	5	(8, 7, 6, 5)	Hyper cube 7 in reverse orientation
9	1	2		
10	5	1	(5, 4, 3, 2, 1)	Transcendence range order 1
11	6	7	(6, 7)	Enveloped domain 7
12	3	2		Enveloped domain 3
13	7	3	(7, 6, 5, 4, 3)	Transcendence range order 3 in reverse orientation
14	6	6	(6, 6)	Self referral Sathapatya format for 6-space

15	7	3	(7, 6, 5, 4, 3)	Transcendence range order 3 in reverse orientation
16	1	3	(1, 2, 3)	Transcendence from 3 to 1 in reverse orientation

Table 3**Aadi Chakra (initial existence cycle) of Ganita Sutra 2****Aadi Chakra (beginning cycle)**

SN	Sutra	Upsutra	Number of letters	Word
1	1		16	आदिचक्र
2		1	10	शक्ति
3	2		28	ब्रह्म
4		2	18	प्रकृति
5	3		15	तेज
6		3	23	अंहकार
7	4		17	आत्मा
8		4	21	शिवालय
9	5		20	श्रीः
10		5	08	आकाश
11	6		19	अमृत
12		6	18	विद्या
13	7		24	पुरुष
14		7	37	श्रीभगवान
15	8		16	जीव
16	9		16	प्राण
17		8	16	बीज्
18	10		09	काल
19		9	11	यजु
20	11		14	रज्जु

21		10	16	गायत्री
22	12		20	देव
23		11	17	दिव्य
24	13		20	वेद
25		12	09	राग
26	14		17	द्रव्य
27		13	32	जर्नादन
28	15		16	ओम्
29	16		16	ॐ

Table 4

Source formulations ten folds

Formulation Mandal

Ten folds of TCV of

Word formulation 'मंडल'

S N.	Symbol	Value	Total
1.	W	1	1
2.	S	3	4
3.	L	7	11
4.	T	29	40
5.	T T	78	78
6.	F F	169	247
7.	F	85	332
8.	H	102	434
9.	R	215	649
10.	SR	459	1108

Table 5

Ganita Sutras with TCV values

Sutra	TCV	Total
1.	68	68
2.	107	175
3.	56	231
4.	52	283
5.	71	354
6.	76	430
7.	114	544
8.	67	611
9.	56	667
10.	41	708
11.	58	766
12.	73	839
13.	79	918
14.	81	999
15.	56	1055
16.	52	1107

Note :- 1107 + 01 = 1108.

Table 6

Formulation Shiv

Ten folds of TCV of

Word formulation 'शिव'

S N.	Symbol	Value	Total
1.	W	1	1
2.	S	2	3
3.	L	4	7
4.	T	12	19
5.	T T	21	21
6.	F F	92	113
7.	F	54	167
8.	H	40	207
9.	R	100	307

10.	SR	212	519
-----	-----------	-----	------------

Table 7

Text of VGS

VGS text of 16 sutras and 13 upsutras is as follows

**OR SIXTEEN SIMPLE MATHEMATICAL FORMULAE FROM THE VEDAS
SIXTEEN SUTRAS AND THEIR COROLLARIES**

Sutras	Sub-Sutras or Corollaries
1. एकाधिकेनपूर्वेण EkadhikenaPurvena (also a corollary)	1. आनुरूप्येण Anurupyena
2. निखिलंनवतश्चरमंदशतः NikhilamNavatascaramamDasatah	2. शिष्यते शेषसंज्ञः SisyateSesasamjnah
3. ऊर्ध्वतिर्यग्भ्याम् Urdhva-tiryagbhyam Adyamadyenatyamantyena	3. आद्यमाद्येनान्त्यमन्त्येन
4. परावर्त्य योजयेत् ParavartyaYojayet	4. केवलैः सप्तकंगुण्यात् KevalaihSaptakamunyat
5. शून्यंसाम्यसमुच्चये SunyamSamyasamuccaye	5. वेष्टनम् Vestanam
6. (आनुरूप्ये) शून्यमन्यत् (Anurupye) Sunyamanyat	6. यावदूनंतावदूनम् Yavadunamavadunikrtya
7. संकलनव्यवकलनाभ्याम् Sankalana-vyavakalanabhyam (also a corollary)	7. यावदूनंतावदूनीकृत्य वर्गं च योजयेत् YavadunamTavadunikrtyaVarganca yojayet
8. पूरणापूरणाभ्याम् Puranapuranaabhyam	8. अन्त्ययोर्दशकेऽपि Antyayordasake 'pi
9. चलनकलनाभ्याम्	9. अन्त्ययोरेव

Calana-kalanabhyam	Antyayoreva
10. यावदूनम् Yavadunam	10. समुच्चयगुणितःSamuccayagunita
11. व्यष्टिसमष्टिःVyastisamastih	11. लोपनस्थापनाभ्याम्Lopanasthapanabhyam
12. शेषाण्यङ्.केनचरमेण SesanyankenaCaramena	12. विलोकनम् Vilokanam
13. सोपान्त्यद्वयमन्त्यम् Sopantyadvayamantyam	13. गुणितसमुच्चयः समुच्चयगुणितः GunitasamuccayahSamuccayagunitah
14. एकन्युनेनपूर्वेणEkanyunenaPurvena	
15. गुणितसमुच्चयःGunitasamuccayah	
16. गुणकसमुच्चयःGunakasamuccayah	

[Note: This list has been compiled from stray references in the text—
Editor]

Table 7

The distinct letters of texts of Ganita Sutras & Upsutras are 36:

- (2) अ (2) आ (3) इ (4) ई (5) उ (6) ऊ (7) ऋ (8) ए (9) ओ (10) ऐ
 (11) क् (12) ख् (13) ग् (14) ङ् (15) च् (16) ज् (17) ञ् (18) ट्
 (19) प् (20) त् (21) द् (22) ध् (23) न् (24) प् (25) भ् (26) म् (27)
 य् (28) र् (29) ल् (30) व् (31) श् (32) स् (33) ष् (34) ङ् (35) ँ

(36) ऽ

table 8

Organization of Devnagri alphabet (DA)

Devnagri alphabet (DA), as letter alphabet is of following organization

Devnagri Varanmala

देवनागरी वर्णमाला

Nine vowels

अ इ उ ऋ लृ ए ओ ऐ औ
आ ई ऊ

5 x 5 Varga consonants

क्	ख	ग्	घ	ङ
च्	छ	ज्	झ	ञ
ट्	ठ्	ड्	ढ	ण
त्	थ	द	ध	न
प्	फ	ब	भ	म

Anthstha letters:

य् र् ल् व्

Ushmana letters:

श् स् ष्ह

Yama letters

॰ ॱ ॲ ॳ ॴ ॵ ॶ ॷ

Table 9

Feature 3 Numbers alphabet (अङ्गसाम्नाय) Ank Samanaye

Devnagri Varanmala of letters and parallel numbers formats

देवनागरी (41) वर्णमाला (36)

$$[{\{(6+6+7+1+8+2+3+1+3+4=41), \\ (7+1+2+7+1+9+2+5+2=36)\}; \\ 41+36=77}]$$

Nine vowels

अ इ उ ऋ लृ ए ओ ऐ औ TCV (अ इ उ ऋ लृ ए ओ ऐ औ) =45
1 2 3 4 5 6 7 8 9 =45 Class 1 letters = TCV 45

5 x 5 Varga consonants

क ख ग घ ङ 1 2 3 4 5 = TCV (क ख ग घ ङ) =15
च छ ज झ ञ 2 3 4 5 6 = TCV (च छ ज झ ञ) =20
ट ठ ड ढ ण 3 4 5 6 7 = TCV (ट ठ ड ढ ण) =25
त थ द ध न 4 5 6 7 8 = TCV (त थ द ध न) =30
प फ ब भ म 5 6 7 8 9 = TCV (प फ ब भ म) =35
TOTAL TCV = 125 Class 2 letters = TCV 125

Anthstha letters:

य र ल व 1 3 5 7 = 16 = TCV (य र ल व)
Class 3 letters = TCV 16

Ushmana letters:

श स ष ह 2 3 6 9 = 20 = TCV (श स ष ह)
Class 4 letters = TCV 20

Yama letters

ॐ ऌ ॡ ऋ ॢ ण ॣ ष ॥
9 10 11 12 13 14 15 16
Class 5 letters = TCV= 100

Grand summation value of TCV of formulation

Devnagri varanmala and its quadruple classes

$$= 77 + 45 + 125 + 16 + 20 = 283$$

Figure 1 sathapatya measuring rod

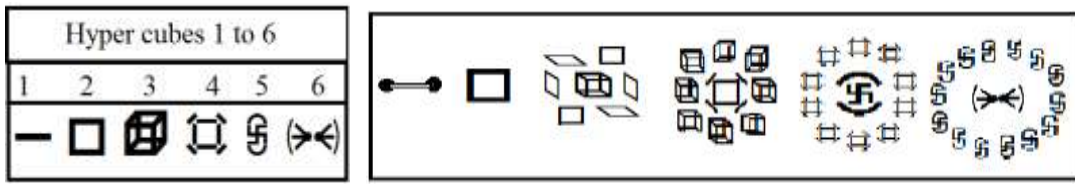


Figure 2

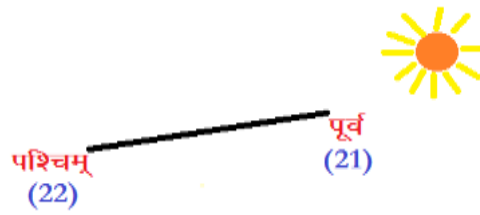


Figure 3, 4, 5, 6

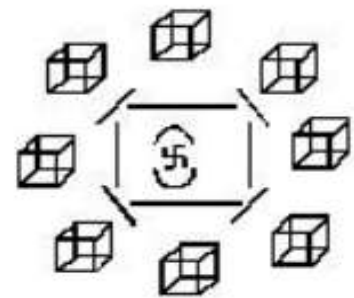


Figure 7

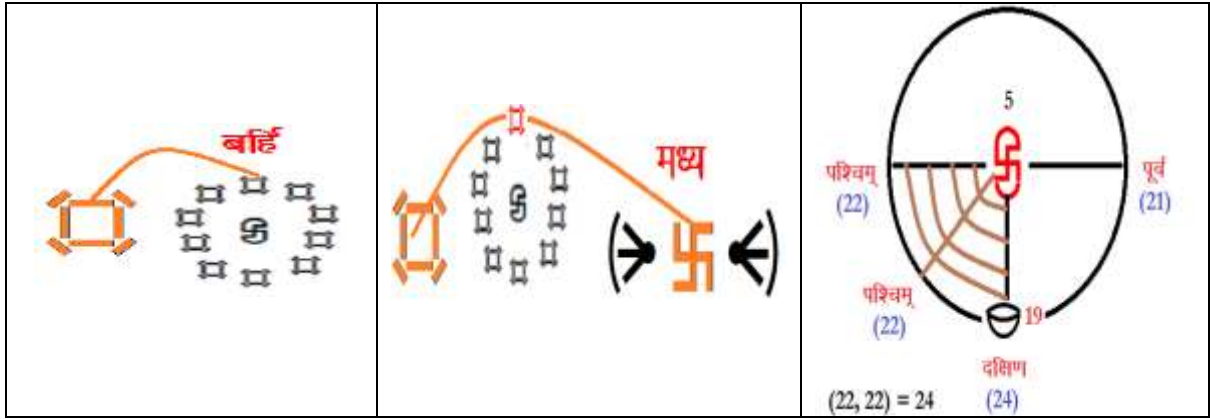


Figure 8 and 9

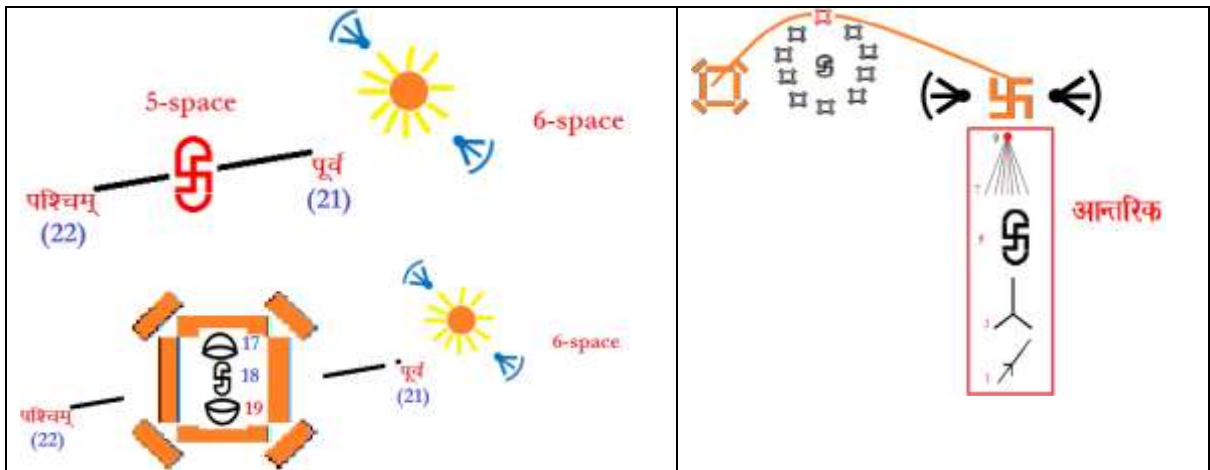


Figure 10

(ए) = 6
 6 = षट्
 (षट्) = 10
 10 = दश
 (दश) = 10 = 4 + 6

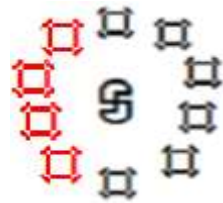


Figure 11

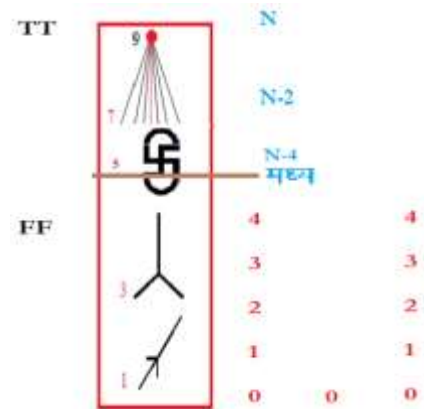


Figure 12

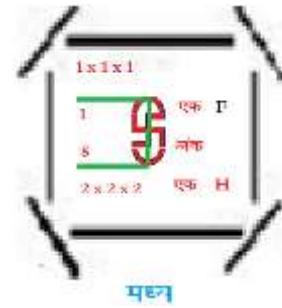
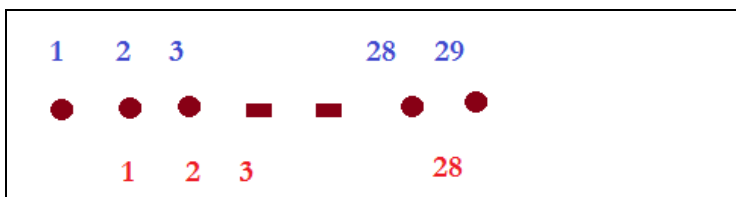
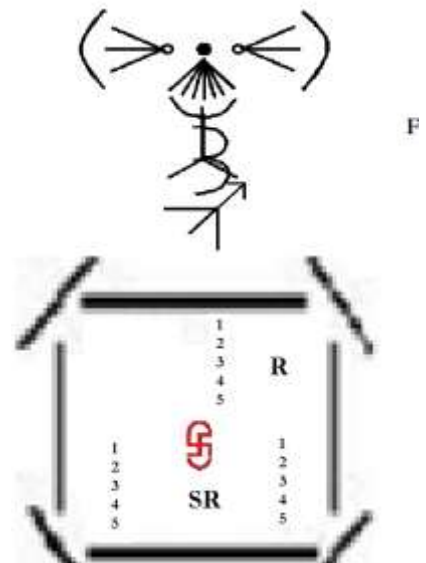
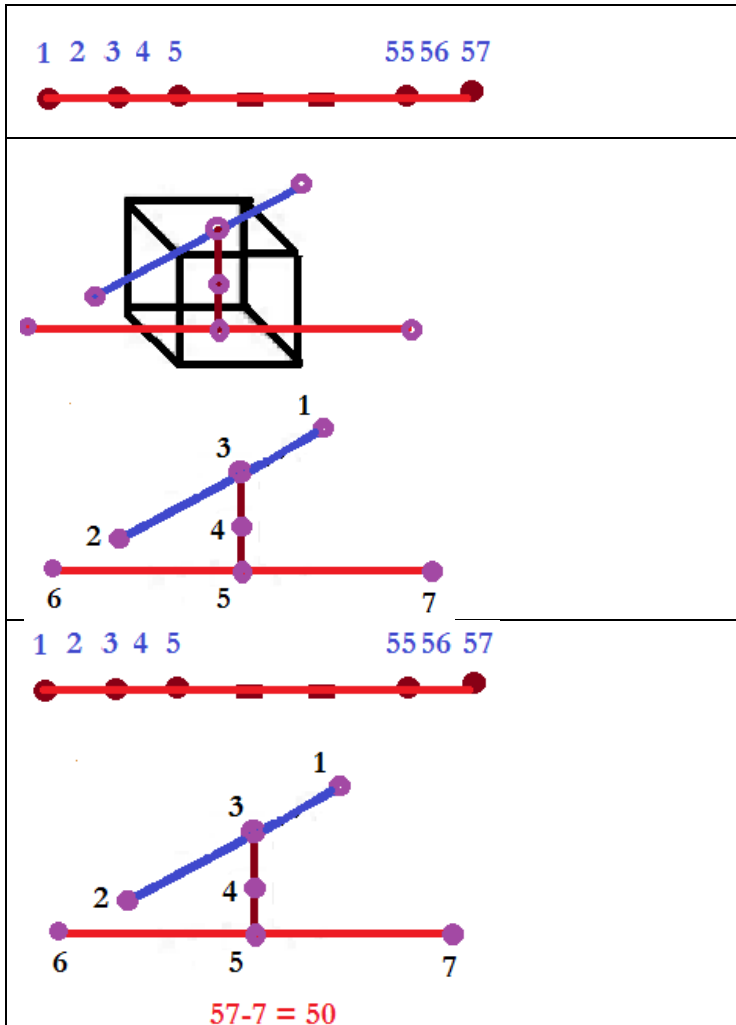


Figure 13





Misc text

Brahama is the titulary (god)⁽¹⁴⁾ of measure⁽¹⁵⁾ of both sathapatya measuring rod⁽¹⁶⁾ and rope⁽¹⁷⁾. *Vishnu*⁽¹⁸⁾ is the titulary (god) of the measuring rod while *Vashukinaag*⁽¹⁹⁾ is the titulary god of measuring rope.

R1	1S	2S	3S	4S	5S	6S	7S	8S	9S	10S	11S	12S	13S	14S	15S	16S
R2	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	H11	H12	H13	H14	H15	H16
R3	12	8	4	14	4	8	12	16	2	10	12	6	14	12	14	2

Vedic knowledge as a speaking language⁽⁶⁰⁾

Vedic knowledge, in its composed form, has reached us, as a ‘wholesome and unified discipline⁽⁶¹⁾’, as a speaking language of devnagri alphabet. Shiskavalli of Tatterya⁽⁶²⁾ Upanshid settles and preserve six steps of speaking knowledge being

Om ! We shall speak of the science of pronunciation. (The things to be learnt are) the alphabet, accent, measure,

emphasis, uniformity, juxtaposition. This has been spoken the chapter on pronunciation.

This six steps phasing is of triple pairs, which together, stand settled in mandal upanshid and dakshinmurti upanshid, parallel to triple axes of solid order of transcendental origin, of chatusheet.

This, as such becomes parallel with meanings flow as sentences⁽⁶³⁾ of padas⁽⁴⁴⁾ having sequential varni⁽⁴⁵⁾ and Uccharan.

This transcendental flow is designated as divya ganga parvaha⁽⁴⁷⁾ from the origin seat of Chatusheet as bindu sarovar⁽⁴⁸⁾ fountaining seven streams through artifices of components of sole syllable Om.

Transcendence through quadruple components of Om takes to Pushpika of (Self referral⁽⁶⁶⁾ origin of Kamal Aasan⁽⁶⁵⁾)

Factors of Numbers range 1 to 16

The numbers range 1 to 16 leads to factors 29. The value $29 = 16+13$ as values pair (16, 13) is parallel with upsutras being 13 and sutras being 16.

Ganita sutra-1 the source sutra

VGS-1 text is of 16 letters. The sathapatya formats of these letters make sequential structural keys for sutra-1 to sutra-16 sutras. VG upsutra-1 is the source upsutra. It is of ten letters. The beginning, middle and end placements, together with placements of ten letters of Ganita upsutra-1 make structural keys of Ganita upsutras 1 to 13. Ganita upsutras also bridge the gaps between consecutive sutras. The integrated of Ganita sutras and upsutras is of 29 sequential steps as under:

Step	Sutra / Upsutra	Step	Sutra / Upsutra	Step	Sutra / Upsutra
1	S-1	11	S-6	21	US-10
2	US-1	12	US-6	22	S-12
3	S-2	13	S-7	23	US-11
4	US-2	14	US-7	24	S-13
5	S-3	15	S-8	25	US-12
6	US-3	16	S-9	26	S-14
7	S-4	17	US-8	27	US-13
8	US-4	18	S-10	28	S-15
9	S-5	19	US-9	29	S-16
10	US-5	20	S-11		

Source sutra: Ganita sutra-1

Translation of letters text to numbers text

Letter	ए	क्	आ	ध्	इ	क्	ए	न्	अ
TCV	6	4	2	7	2	4	6	8	1
Letter	प्	ऊ	र्	व्	ए	प्	अ		
TCV	5	6	3	7	6	7	1		

Translation of numbers text to sathapatya text

TCV	6	4	2	7	2	4	6	8	1
Sathapatya	6S	4S	2S	7S	2S	4S	6S	8S	1S
TCV	5	6	3	7	6	7	1		
Sathapatya	5S	6S	3S	7S	6S	7S	1S		

(iv) External characteristics (Boundary fold)

Sathapatya	6S	4S	2S	7S	2S	4S	6S	8S	1S
------------	----	----	----	----	----	----	----	----	----

Body Boundary components	12	8	4	14	4	8	12	16	2
Sathapatya	5S	6S	3S	7S	6S	7S	1S		
Body Boundary components	10	12	6	14	12	14	2		

(v) Middle characteristics (Middle Geometry)

Sathapatya	6S	4S	2S	7S	2S	4S	6S	8S	1S
Middle (Signautre) Geometry	7	5	3	8	3	5	7	9	2
Sathapatya	5S	6S	3S	7S	6S	7S	1S		
Middle (Signautre) Geometry	6	7	4	8	7	8	2		

(vi) Internal characteristics (Quadruple folds value)

Sathapatya	H6	H4	H2	H7	H2	H4	H6	H8	H1
Middle (Signature) Geometry	22	18	6	26	6	18	22	30	2
Sathapatya	H5	H6	H3	H7	H6	H7	H1		
Middle (Signature) Geometry	18	22	10	26	22	26	2		

Devnagri vowels and consonants⁽⁷¹⁾

Formulation Devnagri varanmala, is of placement value 77. Nine Vowels are of placement value 45 and 33 Consonants are of placement value 181. These together $(77+45+181) = 283$ is parallel with 283 letters of 16 ganita sutras.

(25) Value 37 as origin value of 5-space is parallel with placement value of Sribhagwan श्रीभगवान्, who had shared enlightenment values of Geeta with Arjuna.

(26) Value 45 as origin value of 6-space is parallel with placement value of Nav Braham, the enlightenment of Upnishads.

(27) Value 53 as origin value of 7-space is the solid order Transcendental axis of unity state (7-space).

(28) Value 61 as origin value of 8-space is the enlightenment of Asht Prakrati.

Aadi Chakra (beginning cycle)

SN	Sutra	Upsutra	Number of letters	Word
1	1		16	आदिचक्र
2		1	10	शक्ति
3	2		28	ब्रह्म
4		2	18	प्रकृति
5	3		15	तेज
6		3	23	अंहकार
7	4		17	आत्मा
8		4	21	शिवालय
9	5		20	श्रीः
10		5	08	आकाश
11	6		19	अमृत
12		6	18	विद्या
13	7		24	पुरुष
14		7	37	श्रीभगवान
15	8		16	जीव
16	9		16	प्राण
17		8	16	बीज्
18	10		09	काल
19		9	11	यजु
20	11		14	रज्जु
21		10	16	गायत्री

22	12		20	देव
23		11	17	दिव्य
24	13		20	वेद
25		12	09	राग
26	14		17	द्रव्य
27		13	32	जर्नादन
28	15		16	ओम्
29	16		16	ॐ

Transcendental formulations of values 1 to 29

SN	Word
1	ॐ
2	प्रणवः
3	ओम्
4	ओङ्कार
5	उदगीथः
6	वषट्कारः
7	सप्तभूमि
8	अष्टप्रकृतिः
9	नवब्रह्म
10	प्रब्रह्म
11	एकादशरुद्र
12	द्वादश आदित्य
13	तिथि
14	चर्तुदश मनु
15	राम
16	षोडश कला
17	सप्तदशद्वीप
18	अष्टदशविद्या
19	मन
20	श्रीः
21	शिवालय
22	स्मृति
23	संस्कार

24	पुरुष
25	विष्णु
26	देवता
27	प्रारब्ध
28	ब्रह्म
29	ब्रह्मा

3

Ten folds basis formulations

SN	Word
1	शब्द
2	अक्षर
3	वर्ण
4	दिव्यांक
5	वर्तनि
6	उच्चारण
7	पद
8	अर्थ
9	वाक्य
10	भाव

SN	Word
1	वर्ण
2	स्वर

3	मात्रा
4	बलं
5	साम
6	सन्तान

Sri Om
Organization format features of
text of Ganita Sutras and Upsutras

PART – D

CONTENTS

1. Devnagri varanmala
2. Devnagri varanmala with TCV values
3. Maheshwara Sutras with TCV values
4. Gyatri mantra with TCV values
5. Formulation Shiv with ten folds
6. Saraswati Mantras With TCV
7. Sathapatya Measuring Rod
8. Seven meters

Devnagri varanmala

Devnagri Varanmala

देवनागरी वर्णमाला

Nine vowels

अ इ उ ऋ लृ ए ओ ऐ औ

आ ई ऊ

5 x 5 Varga

consonants

क	ख	ग	घ	ङ
च	छ	ज	झ	ञ
ट	ठ	ड	ढ	ण
त	थ	द	ध	न
प	फ	ब	भ	म

Anthstha letters:

य र ल व

Ushmana letters:

श स ष ह

Yama letters

Devnagri varanmala with TCV values

Devnagri Varanmala

देवनागरी वर्णमाला

$$\text{TCV (देवनागरी वर्णमाला)} = \text{TCV (देवनागरी)} + \text{TCV (वर्णमाला)}$$

$$= (41+36) = 77$$

Nine vowels

अ इ उ ऋ लृ ए ओ ऐ औ TCV (अ इ उ ऋ लृ ए ओ ऐ औ) =45

1 2 3 4 5 6 7 8 9 = 45 Class 1 letters = TCV 45

5 x 5 Varga consonants

क ख ग घ ङ 1 2 3 4 5 = TCV (क ख ग घ ङ) =15

च छ ज झ ञ 2 3 4 5 6 = TCV (च छ ज झ ञ) = 20

ट ठ ड ढ ण 3 4 5 6 7 = TCV (ट ठ ड ढ ण) =25

त थ द ध न 4 5 6 7 8 = TCV (त थ द ध न) =30

प फ ब भ म 5 6 7 8 9 = TCV (प फ ब भ म) =35

TOTAL TCV = 125 Class 2 letters = TCV 125

Anthstha letters:

य र ल व 1 3 5 7 = 16 = TCV (य र ल व)

Class 3 letters = TCV 16

Ushmana letters:

श स ष ह 2 3 6 9 = 20 = TCV (श स ष ह)

Class 4 letters = TCV 20

Yama letters

ॐ ऌ ॡ ऋ ॢ ण ॣ ष ॥

9 10 11 12 13 14 15 16

Class 5 letters = TCV= 100

Grand summation value of TCV of formulation

Devnagri varanmala and its quadruple classes

$$= 77 + 45 + 125 + 16 + 20 = 283$$

Maheshwara Sutras With Tcv

S.N.	Sutra	TCV value	Total	Grand total
------	-------	-----------	-------	-------------

1.	अ इ उ ण्	(1, 2, 3) (7)	13	13
2.	ऋ लृ क्	(4, 5) (5)	14	27
3.	ए ओ ङ्.	(6, 7) 5	18	45
4.	ऐ औ च्	(8, 9) (2)	19	64
5.	ह य व र ट	(9, 1, 7, 3) (3)	23	87
6.	ल ण्	(5) (7)	12	99
7.	ञ म ङ् ण न म्	(6, 9, 5, 7, 8) (9)	44	143
8.	झ भ ज	(5, 8) (6)	19	162
9.	घ ढ ध ष्	(4, 6, 7) (6)	23	185
10.	ज ब ग ड द श्	(4, 7, 3, 5, 6) (2)	27	212
11.	ख फ छ ठ थ च ट त व्	(2, 6, 3, 4, 5, 2, 3, 4) (7)	36	248
12.	क प य	(1, 5) (1)	7	255
13.	श ष स र	(2, 6, 3) (3)	14	269
14.	ह ल्	(9) (5)	14	283

Note:- Anubandh 'ka' 'क्' of second Sutra is associated value 5 as Maheshwara Sutras are of 5-space (Lord Shiv being overlord of 5-space) and 'क्' शिव Shiv gets value 5 as Anubandh (upper bound).



Gyatri Mantra with TCV values

SN	Text formulation	TCV	Total TCV
1	ओउम्	16	16
2	भूर्भव	33	49
3	स्व	11	60
4	तत	10	70
5	सवितुर्	23	93
6	वरेण्यम्	35	128
7	भर्गो	21	149
8	देवस्य	25	174
9	धीमहि	32	206
10	धियो	17	223
11	यो	8	231
12	नः	22	253
13	प्रचोदयात्	30	283

Formulation Shiv with ten folds

Word formulation 'शिव' / Shiv

SN.	Feature	Formulation	value	Total value
1W	W word as entity	'शिव'	1	1
2S	S syllables	'शिव'	2	3
3L	L letters	'श् ि व् अ'	4	7
4T	T TCV (placement value)	'श् ि व् अ' 2 2 7 1	12	19
1T T	T T transcendence through vowels	'श् ि व् अ' $2 \times 0 + 7 \times 3 = 21$	21	21
2F F	F F Sounds	'श् ि व् अ' $4 \times 20 + 12 = 92$	92	113
3F	F Formulations of TCV values	'श् ि व् अ' द्वय, द्वय, सप्त एक 16 16 14 8	54	167
4H	H Hyper cubes format of TCV	'श् ि व् अ' H2H2H7 H1 6 6 26 2	40	207
5R	R Transcendence range	$(2L + T)5$ $(2 \times 4 + 12) \times 5 = 100$	100	307
6SR	SR Synthesis of pair of transcendental ranges	$2R + T$ $2 \times 100 + 12 = 212$	212	519

Saraswati Mantras With Tcv





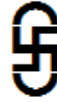
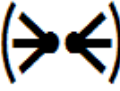

S	Sutra	TCV Value	Total TCV
1.	ॐ प्रणो देव इति	16+41+8 = 65	65
2.	ॐ आ नो दिव इति	16+33+8 = 57	122
3.	ॐ पावका न इति	16+27+8 = 51	173
4.	ॐ चेदचित्रीति	16+24+8 = 48	221
5.	ॐ महो अर्ण इति	16+37+8 = 61	282
6.	ॐ चत्वारि वागिति	16+33+8 = 57	339
7.	ॐ यद्वागवदन्तीति	16+48+8 = 72	411
8.	ॐ देवी वाचम्इति	16+44+8 = 68	479
9.	ॐ उत त्व इति	16+20+8 = 44	523
10.	ॐ अम्बितम्इति	16+33+8 = 57	580

Note:- 580 = 555+25

TCV Saraswati (सरस्वति) = 25



Sathapatya Measuring Rod

Hyper cubes 1 to 7						
1	2	3	4	5	6	7
						
A^1	A^2	A^3	A^4	A^5	A^6	A^7
$2B^0$	$4B^1$	$6B^2$	$8B^3$	$10B^4$	$10B^5$	$14B^6$
2	8	18	32	50	72	98

$$2+8+18+32+50+72+98 = 280$$

Geometries of 1-space = 3

$$3+280 = 283$$

Letters of Ganita Sutras 1 to 16

$$= 283$$

Seven meters

छन्दः
(32)

Letters of seven meters = 252

Total value 284

Letters of Ganita Sutras 283

Sl	Meter	Letters	Total
0	Chand	32	32
1	Gyatri	24	56
2	Ushanik	28	84
3	Anushtup	32	116
4	Brehti	36	152
5	Pankti	40	192
6	Trishtup	44	236
7	Jagti	48	284

Document 02

Devnagri Alphabet

देवनागरीवर्णमाला

Nine vowelsस्वरः

अ इ उ ऋ लृ एओ ऐ औ

5 x 5 Vargaconsonantsवर्गः

कवर्ग(कु)क ख ग घ ङ

चवर्ग(चु)च छ ज झ ञ

टवर्ग(टु)ट ठ ड ढ ण

तवर्ग(तु)त थ द ध न

पवर्ग(पु)प फ ब भ म

Anthsthaletters:अन्तःस्थ

य र ल व

Ushmana letters:उष्मण

श स ष ह

Yamalettersयम

• ँ ः ऎ ए ङ ऑ ऒ ओ औ



Document 3

Placement values (TCV)

Devnagri alphabet letters

Devnagri Alphabet

Nine vowelsस्वर:

1 2 3 4 5 6 7 8 9

5 x 5 Vargaconsonantsवर्गाः

कवर्ग(कु)1 2 3 4 5

चवर्ग(चु)2 3 4 5 6

टवर्ग(टु)3 4 5 6 7

तवर्ग(तु)4 5 6 7 8

पवर्ग(पु)5 6 7 8 9

Anthsthaletters:अन्तःस्थ

1 3 5 7

Ushmana letters:उष्मण

2 3 6 9

Yamalettersयम

9 10 11 12 13 14 15 16



Document 4

Devnagri Alphabet with placement values

Devnagri Alphabet

Nine vowelsस्वर:

अ इ उ ऋ लृ एओ ऐ औ
1 2 3 4 5 6 7 8 9

5 x 5 Vargaconsonantsवर्गाः

कवर्ग(कृ)

क ख ग घ ङ
1 2 3 4 5

चवर्ग(चु)

च छ ज झ ञ
2 3 4 5 6

टवर्ग(टु)

ट ठ ड ढ ण
3 4 5 6 7

तवर्ग(तु)

त थ द ध न
4 5 6 7 8

पवर्ग(पु)

प फ ब भ म
5 6 7 8 9

Anthsthaletters:अन्तःस्थ

य र ल व
1 3 5 7

Ushmana letters:उष्मण

श स ष ह
2 3 6 9

Yamalettersयम

॰ ँ ॡ ॢ ॣ । ॥ ० ॠ
9 10 11 12 13 14 15 16