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Article 7

## **Organization format of Vedic Ganita Sutras Text & Mathematics**

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## Vedic Ganita sutras and Upsutras (VGS) text<sup>(1)</sup>

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

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

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 | ध् | इ | क् | ए | न् | अ | प् | স্ত | र् | व् | ए   | ण्    | अ |
|----|---|----|---|----|---|----|---|----|---|----|-----|----|----|-----|-------|---|
| R2 | 6 | 4  | 2 | 7  | 2 | 4  | 6 | 8  | 1 | 5  | 6   | 3  | 7  | 6   | 7     | 1 |
|    |   |    |   |    |   |    |   |    |   |    |     |    |    | Tał | ole 1 |   |

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

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

| R1 | 1          | 2  | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10  | 11  | 12  | 13  | 14  | 15  | 16      |
|----|------------|----|----|----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|---------|
| R2 | 1 <b>S</b> | 2S | 3S | 4S | 5S | 6S | 7S | 8S | 9S | 10S | 11S | 12S | 13S | 14S | 15S | 16S     |
| -  | •          |    |    |    |    |    |    |    |    |     |     |     |     |     | r   | Table 2 |

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

Three folds of external<sup>(5)</sup>, middle<sup>(6)</sup> and internal<sup>(7)</sup> characteristics of sathapatya alphabet are as per the Upanshids settlement, particularly of Mandal<sup>(17)</sup> upanshid and Dhakshna murti<sup>(18)</sup> 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 | 1 <b>S</b> |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|------------|
| 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          |
|    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | т  | 1.1.       |

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 | 1 <b>S</b> |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|------------|
| 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 (n), 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 :-

| Sutra | Se    | rial numb     | er of  | Fire   | st letter o | of  | Structural keys Pair values |
|-------|-------|---------------|--------|--------|-------------|-----|-----------------------------|
|       | Lette | er of Sutra   | 1 with |        | the         |     | of C4 and C7 as             |
|       |       | TCV value     | ue     | corr   | respondi    | ng  | end values of structural    |
|       |       |               |        |        | Sutra       |     | keys format                 |
| C1    | C2    | C3            | C4     | C5     | C6          | C7  | C8                          |
|       | SN    | letter        | TCV    | Ganita | First       | TCV |                             |
|       |       |               |        | Sutra  | Letter      |     |                             |
| 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      | জ           | 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      | গ্          | 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    | জ             | 6      | 11     | व्          | 7   | (6, 7)                      |
| 12    | 12    | र्∕ <u>र्</u> | 3      | 12     | গ্          | 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)           |

## Letterwise structural keys of Ganita Sutras

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 |

| 2  | 2 |   | (2, 2, 4, 5, 5) |                                     |
|----|---|---|-----------------|-------------------------------------|
| 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                             |

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 (ज्रसा). 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 चतुषपीट. 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

Number of Sutra Upsutra Word SN letters 1 आदिचक्र 1 16 2 1 शक्ति 10 3 2 28 ब्रह्म 4 2 18 प्रकृति 5 3 15 तेज 3 23 6 अंहकार 7 17 4 आत्मा

Aadi Chakra (beginning cycle)

| 8   4   21   शिवालय     9   5   20   श्रीः     10   5   08   आकाश     11   6   19   अमृत     12   6   18   विद्या     13   7   24   पुरूष     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   देद     25   12   09   राग     26   14   17   द्रव्य     27   13   32   जर्नादन     28   15   16   ओम्     29   16   16   ऊ <th></th> <th></th> <th></th> <th></th> <th></th> |    |    |    |    |         |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|----|----|---------|
| 10508आकाश11619अमृत12618विद्या13724पुरुष14737श्रीभगवान15816जीव16916प्राण17816बीज्181009काल19911यजु201114रज्जु211016गायत्री221220देव231117दिव्य241320वेद251209राग261417द्रव्य271332जर्नादन281516ओम्291616औ                                                                                                                                                                                                                                                                                                                                                                                     | 8  |    | 4  | 21 | शिवालय  |
| 11619अमृत12618विद्या13724पुरूष14737श्रीभगवान15816जीव16916प्राण17816बीज्181009काल19911यजु201114रज्जु211016गायत्री221220देव231117दिव्य241320वेद251209राग261417द्रव्य271332जर्नादन281516ओम्291616औ                                                                                                                                                                                                                                                                                                                                                                                              | 9  | 5  |    | 20 | श्रीः   |
| 12 6 18 विद्या   13 7 24 पुरूष   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 औप                                                                                                                                                                                                                                                                                             | 10 |    | 5  | 08 | आकाश    |
| 13724पुरूष14737श्रीभगवान15816जीव16916प्राण17816बीज्181009काल19911यजु201114रज्जु211016गायत्री221220देव231117दिव्य241320वेद251209राग261417द्रव्य271332जर्नादन281516ओम्291616ऊँ                                                                                                                                                                                                                                                                                                                                                                                                                 | 11 | 6  |    | 19 | अमृत    |
| 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   औप                                                                                                                                                                                                | 12 |    | 6  | 18 | विद्या  |
| 15816जीव16916प्राण17816बीज्181009काल19911यजु201114रज्जु211016गायत्री221220देव231117दिव्य241320वेद251209राग261417द्रव्य271332जर्नादन281516ओम्291616ऊँ                                                                                                                                                                                                                                                                                                                                                                                                                                         | 13 | 7  |    | 24 | पुरूष   |
| 16916प्राण17816बीज्181009काल19911यजु201114रज्जु211016गायत्री221220देव231117दिव्य241320वेद251209राग261417द्रव्य271332जर्नादन281516ओम्291616🕉                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 14 |    | 7  | 37 |         |
| 17816बीज्181009काल19911यजु201114रज्जु211016गायत्री221220देव231117दिव्य241320वेद251209राग261417द्रव्य271332जर्नादन281516ओम्291616🕉                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 15 | 8  |    | 16 | जीव     |
| 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     3ồ                                                                                                                                                                                                   | 16 | 9  |    | 16 | प्राण   |
| 19911यजु201114रज्जु211016गायत्री221220देव231117दिव्य241320वेद251209राग261417द्रव्य271332जर्नादन281516ओम्291616🕉                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 17 |    | 8  | 16 | बीज्    |
| 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   🕉                                                                                                                                                                                                                                                                                                                                               | 18 | 10 |    | 09 | काल     |
| 211016गायत्री221220देव231117दिव्य241320वेद251209राग261417द्रव्य271332जर्नादन281516ओम्291616🕉                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 19 |    | 9  | 11 | यजु     |
| 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 🕉                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 20 | 11 |    | 14 |         |
| 231117दिव्य241320वेद251209राग261417द्रव्य271332जर्नादन281516ओम्291616🕉                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 21 |    | 10 | 16 | गायत्री |
| 24 13 20 वेद   25 12 09 राग   26 14 17 द्रव्य   27 13 32 जर्नादन   28 15 16 ओम्   29 16 16 🕉                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 22 | 12 |    | 20 | देव     |
| 251209राग261417द्रव्य271332जर्नादन281516ओम्291616🕉                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 23 |    | 11 | 17 |         |
| 26     14     17     द्रव्य       27     13     32     जर्नादन       28     15     16     ओम्       29     16     16     ॐ                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 24 | 13 |    | 20 | वेद     |
| 27     13     32     जर्नादन       28     15     16     ओम्       29     16     16     ॐ                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 25 |    | 12 | 09 | राग     |
| 28     15     16     ओम्       29     16     16     उँ                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 26 | 14 |    | 17 |         |
| 29 16 16 <del>3</del> 0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 27 |    | 13 | 32 | जर्नादन |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 28 | 15 |    | 16 | ओम्     |
| Table 8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 29 | 16 |    | 16 | Ť       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |    |    |    |    | 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<sup>(34)</sup> and Neelkanth<sup>(35)</sup>. Of solid order<sup>(36)</sup> of transcendental origin<sup>(37)</sup>, 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<sup>(38)</sup> of Chatushpeet, as such axes of solid order manifested values are of spatial format<sup>(39)</sup>.

Chatushpeet is the creation format. It is 4-space format. Its deity is four head brahma. Manifested form of Chatushpeet is parallel with features of idol of Brahma. It is of hyper cube 4 form and format.

Brahma mediates within cavity of his own heart at seat of transcendental lord Shiv and with the grace of transcendental lord, Brahma multiplies as ten brahmas in Shivlok. It is parallel with 4-space as domain transiting and transforming in the role of 4-space as boundary of ten components of 5-space. Chatushpeet at boundary of 5-space, permits take off for solid boundary components and as a result solid boundary component (cube / 3-space) as dimension manifests (3, 4, 5, 6) set up for the outer space. The spatial order further makes 6-space as dimension. Parallel with eight solid boundary components of Chatushpeet, there emerges a set up of eight 6-space dimensions, which together constitute a dimension frame for hyper cube 8 of four folds (6, 7, 8, 9). The summation value of these quadruple folds (6+7+8+9=30) is parallel with placement value of formulation Chatushpeet.

This reach as of steps (3, 4, 5, 6) and (8) is of values range (3, 4, 5, 6, 8).

VGS text is having formulations for values (0, 1, 2, 7, 8, 9) and not for (3, 4, 5, 6 and 8), as values range (3, 4, 5, 6, 8) is the foundation upon which VGS mathematics is superstructure.

#### Placement value of formulation for number values (1 to 10)

द्वय अष्ट एक त्रय चर्तू पञुच षट्र सप्त नव दश Х Х Х Х Х Х Х 

Numbers value (1 to 10) manifest as formulations of placement values, as under:

The above organization feature of placement values of formulations of number values 1 to 10 are parallel with the set up of Chatushpeet spatial order (4-space body of solid order transcendental origin / 5-space origin).

# Formulations (चतुष्ठपीठ) Chatushpeet and बर्हिलक्षण Bahir lakshan, मध्यलक्षण madhy lakshan and आन्तरिकलक्षण antrik lakshan.

The following table outlines the interrelationship of letters text, numbers text and sathapatya text of external, middle and internal values and features of quadruple formulations:

| बर्हि      |         | मध्य      |           | आन्तरिक      |                   |
|------------|---------|-----------|-----------|--------------|-------------------|
| बर्हि      | 21      | मध्य      | 19        | आन्तरिक      | 22                |
|            | 1+2+3+  |           | अर्ध आकाश |              | $H_6$             |
|            | +4+5+6  |           |           |              |                   |
| बर्हिलक्षण | 21 + 22 | मध्यलक्षण | 19 + 22   | आन्तरिकलक्षण | 22 + 22           |
|            |         |           |           |              | परम <b>व्योम्</b> |

| <b>बर्हि</b> आकाश | 21 + 8  | <b>मध्य</b> आकाश | 19 + 8  | <b>आन्तरिक</b> आकाश | 22 + 8    |
|-------------------|---------|------------------|---------|---------------------|-----------|
|                   | ब्रह्मा |                  | नक्षत्र |                     | चतुष्ठपीठ |

## Formulations of Shikshavali

| 1            | 2     | 3         | 4     | 5    | 6      |
|--------------|-------|-----------|-------|------|--------|
| Varan        | swara | Matra     | Balam | Sama | Santan |
| 18           | 15    | 18        | 23    | 15   | 27     |
| (3, 4, 5, 6) | 3x5   | 3x6       | 3+5   | 5    | 9      |
|              |       | 1+6+7+3+1 | +     | 5    | 9      |
|              |       |           | 3x5   | 5    | 9      |

#### Sathapatya features of origin of Chatushpeet

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

 $6 = \[mathbf{weightarrow}\]$  and placement value for (षट्) =  $10 = \[mathbf{a}\]$  such as the second sec

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<sup>(42)</sup> are:

| (i)     | Shabdh / word as wholesome format,                                |
|---------|-------------------------------------------------------------------|
| (ii)    | Akshar <sup>(43)</sup> / syllables / vowels of the Shabdh (Word), |
| (iii)   | Varan <sup>(44)</sup> / letters of the Shabdh (Word) and          |
| <i></i> |                                                                   |

(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<sup>(45)</sup> 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*<sup>(46)</sup> (sequential placements of letters as fold 1) and *uccharan*<sup>(47)</sup> (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<sup>(49)</sup> of N-2 dimension<sup>(50)</sup> and (N-4) dimension of dimension<sup>(51)</sup>. 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<sup>(52)</sup> / pronouncing frequency for each letter as placement value of the letter plus 20 of (Karah), for all letters except Raif<sup>(53)</sup>. 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 Shabdh 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 Shabdh and pada arth satta<sup>(55)</sup> (numbers values of the letters of the word as sathapatya body<sup>(56)</sup> 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 | चर्तु | 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:

| Numbe          | er                              | Sathapatya body |                |                | Sum of         |             |                |                |                |     |                 |
|----------------|---------------------------------|-----------------|----------------|----------------|----------------|-------------|----------------|----------------|----------------|-----|-----------------|
| value          |                                 |                 |                |                | four folds     |             |                |                |                |     |                 |
| H <sub>N</sub> | I <sub>N</sub> 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            | 5-8            | 5           | 6-s            | 7-s            | 8-s            | 9-s | 13-s            |
| R3             | $H_1$                           | H <sub>2</sub>  | H <sub>3</sub> | H <sub>4</sub> | H <sub>5</sub> |             | H <sub>6</sub> | H <sub>7</sub> | H <sub>8</sub> | H9  | H <sub>13</sub> |
| R3             | 2                               | 6               | 10             | 14             | 18             |             | 22             | 26             | 30             | 34  | 50              |

Table-10

 $R_1$  = Number value,  $R_2$  = N-space, N = 1, 2, 3, ....,  $R_3$  = N-space body,  $R_4$  = 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<sup>(57)</sup> (sentence arth parvaha / transcendental content flow manifestation of the order of the value of the letter of the word, and sany vakaya-pankti sanyog<sup>(58)</sup> / transcendental content synthesis of flow manifestation of a pair of streams of same order<sup>(59)</sup>.

#### 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 to 9, 13.

#### **Consolidated table**

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

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

Table 11

## Shiv: transcendental domain formulation<sup>(67)</sup>

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 | शइवअ           | 4     | 7          |  |
| Phase-4 | 2, 2, 7, 1     | 12    | 19         |  |
|         |                |       |            |  |
| Fold-1  | शि व           | 21    | 21         |  |
| 1010-1  | 2x0+7x3        | 21    | <i>4</i> 1 |  |
| Fold-2  | 2+20, 2+20,    | 92    | 113        |  |
| 1010-2  | 7+20, 1+20     | 12    |            |  |
| 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 | 10         |  |



## Maheshwara<sup>(68)</sup> 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<sup>(69)</sup>

Formulation Gyatri ( $\pi$ uत्त्री) 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<sup>(70)</sup>

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<sup>(72)</sup>

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 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

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 (6<sup>th</sup> vowel) of VGS text to value 28 as placement value of formulation Braham.

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 Chatushpeet,

(3) formulation (chatushpeet 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 Chatushpeet of transcendental origin.

(9) Chatushpeet 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 Chatusuhpeet.

(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 13x4 = 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:

- (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 / Chatushpeet).
- (vi) 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 (बाहि) 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        | अदित्यमंडलपुरूष      |
| 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.

\*