Sri – Om
VEDIC MATHEMATICS AWARENESS YEAR

'Credit goes to Swami Bharti Krshna Tirtha Ji Maharaj to focus the attention of present generation about the values of Ganita Sutras (mental Mathematics Sutras)'

All are invited to join Awareness program

All are warmly invited to join the awareness program of Vedic Mathematics. All teachers, parents and students are invited to Learn and Teach Vedic Mathematics for proper intelligence growth at School.

Dr. S. K. Kapoor
Sh. Rakesh Bhatia
Sh. Bhim Sein Khanna
Sh. Deepak Girdhar
- Organizers

ISSUE NO 92

VMS & T principles'
Scriptural References

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FOCUS

I   **Sankhiya Nishtha and Yoga Nishtha**

II   **Quadruple phases and stages of manifestation (व्यक्तः Vykata, अव्यक्तः Avykata, अव्यक्तोऽव्यक्तात् / सनातनः Avykato Avykatat / Sanatana and पुरुष Pursha)**

III   **Om (ॐ), Parnava (प्रणवः), Aum (ओम्) and Aumkar (ओमकार)**

IV   **Body (शरीर), Mind (मन), Intelligence (बुद्धि), consciousness (चित), soul (आत्मा) , Braham (ब्रह्म)**

V   **Single letters meanings Dictionary**

VI   **Organization of Srimad Bhagwad Geeta and its chase by the systems of Ganita Sutras**

VII
Ganita Sutras completeness chase

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1. The chase of completeness of Ganita Sutras and Ganita Upsutras, hereinafter to be referred as Ganita Sutras and subject to reference simply as Sutras would expect that the text shall be approached as it is starting from the title (गणित सूत्राणिः), for Ganita Sutras text and by starting with first letter of the text of Ganita Sutra 1, namely (ए) / sixth vowel and reaching uptill the

last letter of Ganita Upsutra 13 namely ':' / Visergania (Yama letter) of the text of Ganita Sutras including Ganita Upsutras is to be respected for their sequence and organization values.

2. The text of Sutras is to be respectfully approached as it is.

3. The Sutras being part of Vedic Systems, as such it shall be accepting prefix 'ॐ' and suffix 'प्रणवः'.

4. The sequence and organization of letters availed by the text are to be respected.

5. The sequential formulations of 'varnas' (वर्ण) / letters, akshras (अक्षर) / syllable, padas (पाद) / quarters of formulations formats and Shabad (शब्द) / word formulation with complete frequencies of the Text of Ganita Sutras formats are to be followed respectfully and to be chased faithfully.

6. The completes words formulations as basic complete components of Sutras like (एकाधिकेन) / (Ekadhiken) and (पूर्वेण) /(Purvena) / Sutra 1 are to be chased for their specific formats and features to reach at the working Rules of Sutras.

7. The first word formulation of text of Sutra as such because of its dominating role would become the designation of the concerned Sutra like Ganita Sutra 1 is to be approached in terms of its designation as 'एकाधिकेन सूत्र' / Ekadhiken Sutra.

8. Here it also would be relevant to note that the word formulation Sutra (सूत्र) itself is of TCV (सूत्रः) = 9 + 7 + 13 = 16 + 13 = 29 which is parallel to be range value of 16 Sutras and 13 Upsutras.

9. Here It also would be relevant to note that TCV (गायत्री) = 3 + 2+ 1 + 1 + 4 + 1 + 4 = 16 = TCV = (गाय) = 7 + TCV (त्री) = 9.

10. With it, each letter, syllable, quarter format formulations and complete word format formulations are to be approached in terms of their formats, features, values, virtues, order for their reach and attainments.

11. As this chase is going to be of very large number of steps, as such, there can be specific chase steps in terms of specific words formulations of the text. Illustratively the formulations (i) Gana (गण) (ii) Ganita (गणित) (iii) Gunita (गुणिता) and (iv) Gunak (गुणक) deserve to be chased specifically.

12. The specific format formulation varga / (वर्गः) / Square deserve to be chased for comprehension and appreciation as well as for imbibing the values thereof for insight about the completeness of Ganita Sutras systems in universalized applications of this specific formats.

13. One may have a pause here and take note that TCV (वर्गः) = 14 + 13 = 27 = TCV (घनः) = 14 + 13.

14. Parallely, it also would be relevant to take note that NVF (Square) = 50 = NVF (Void cube), and NVF (straight) = 102 = NVF (2-space) = NVF (Full) + NVF (Full).

15. Further it also would be relevant to note that features of text of Sutras deserve to be classified and categorized like the formulations of numbers values availed by the text.

16. The numbers values formulations availed by the text of Ganita Sutras comes to be the five fold range of formulations namely (एक (one) '1' , द्वव (two) '2' सप्त (Seven) '7'), नव (nine) '9' and द्वस (ten) '10' which lead to summation value 1+ 2+ 7 + 9 + 10 = 29 which is parallel to the total range of 16 sutras and 13 Upsutras.

17. One may further have a pause here and take note that the number value '0' / zero / 'शून्य' as well is availed by the text.

18. In the context, it also would be relevant to note that the addition of this value to value 29 makes no change but at the same time it makes five steps long transcendence range of numbers (1, 2, 7, 9, 10) being a self referral (6-space) six steps long range of numbers values (0, 1, 2, 7, 9, 10).

19. One may further have a pause here and take note that a four fold manifestation layer (1, 2, 3, 4), with addition of the fifth fold of value '0' there emerges transition and transformation for the four fold manifestation layer (1, 2, 3, 4) into five fold transcendence range (0, 1, 2, 3, 4) without making any difference in summation value for both these four fold manifestation layer and five fold transcendence range as 0 + 1 + 2 + 3 +4 = 1+2 +3 +4.

20. Still further, in the context, it also would be relevant to note that 4-space plays the role of creative boundary of manifestation format for the transcendental (5-space) domain of sequential transcendence Phenomenon of pair of steps firstly taking from domain to dimension and secondly taking further from dimension to dimension of dimension.

21. Still further it also would be relevant to note that the creative boundary of 5-space is of ten components.

22. This as such brings into the feature as to how the four fold manifestation layers transit and transform into five fold transcendence ranges.

23. Still further It would be relevant to note that five points sequential arraignment is parallel to four units coverage range.

24. The specific format formulations (वर्गः) is a composition of six letters namely (i) व् (ii) अ (iii) ॑ (iv) ग् (iv) अ (v) ः.

25. This formulation leads to the formulation of first five letters namely (वर्ग).

26. Here in the context It also would be relevant to note that the letter (अ) repeats its presence and as such the formulation first four letters becomes the formulation of specific letters 'वर्ग्'.

27. The placement of letters of above formulation comes to be:
   (i)   The first letter 'वृ' is the fourth anthstha.
   (ii)   The second letter 'अ' is the first vowel
   (iii)   The third letter '' is the graded middle value for the first antstha and
   (iv)   The fourth letter 'ग्' is the third consonant of first row of varga consonants.

28. The TCV values range parallel to the range of five letters formulation (वर्ग) comes to be (7, 1, 2, 3, 1) with summation value $7 + 1 + 2 + 3 + 1 = 14$

29. One may have a pause here and take note that the artifice value 14 is parallel to the summation value of quadruple artifices (2, 3, 4, 5) parallel to four fold manifestation layer (2, 3, 4, 5) of hyper cube of spatial dimensional order (2-space in the role of dimension of 4-space)

30. Here it also would be relevant to note that TCV (घन) = $4+1+8+1= 14$ = TCV (वर्ग)

31. One may have a pause here and take note that the formulation 'Ghan' / (घन) / cube/ solid and formulation varga (वर्ग) / square / surface are accepting same transcendental (5-space) code values.

32. It is this feature which deserve to be comprehended well for proper appreciation and full imbibing to have thorough insight for the completeness of the Mathematics systems of Ganita Sutras.

33. With it, Vedic mathematical systems approach of Ganita Sutras is to be chased as a set of elements which takes us parallel to the manifestation and transcendence for square and cube

34. Once again One shall have a pause here and take note that the NVF (Square) = 81 = NVF (Void cube)..

35. Still further It also would be relevant to note that NVF (Void) = 50 = NVF (V) + NVF (O) + NVF (I) + NVF (D) = $22 + 15 + 9 + 4$.

36. One may further have a pause here and take note that the chase of quadruple artifices (22, 15, 9, 4) and for its opposite orientations settings (4, 9, 15, 22) will lead us to the following chase features:
   (i) $50 = 22 + 15 + 9 + 4$
            $= 4 + 9 + 15 + 22$
            $= (0+ 4)+ (0+4+5) + (0+4+5+6) + (0+4+5+6+ 7)$

37. One may further have a pause here and take note that the synthetic values of single, double, triple, quadruple and penta number of dimensions of zero order (0-space in the role of dimension), sequentially lead us to synthetic values transcendence (five steps long range) as under:
   (i)   0-space as dimension structures 2-space as domain
   (ii)   Pair of 0-space as dimension lead to firstly at 2-space domain and secondly at 4-space as domain

(iii)   Triple dimension of 0 order sequentially take at first step to 2-space domain, at second step to 4-space as domain, at third step to 6-space as domain

(iv)   Quadruple dimensional of 0 order sequentially take at first step to 2-space as domain and at second step to 4-space as domain and third step to 6-space as domain and at fourth step to 8-space as domain

(v)   Finally, penta / five dimensions of zero order sequentially lead us to 2-space, 4-space, 6-space, 8-space and 10-space as a final range

38. One may have a pause here and take note that quadruple artifices (2, 4, 6, 8) parallel to four steps reach of single, double, triple and quadruple dimensions of zero order of reach to 2-space domain, 4-space domain, 6-space domain, 8-space domain shall be permitting split for measures values (2, 4, 6, 8) as 1 + 1, 2+2, 3+3, 4 + 4.

39. The above split because of zero dimensional order shall be leading to pair of quadruple set ups parallel to quadruple artifices set ups (1, 2, 3, 4), (1, 2, 3, 4).

40. One may have a pause here and take note that artifice 14 = 2 +3 +4 + 5 permits re-organization as (1+2 +3 +4) + (1+2 +3 +4) = (0 + 1 + 2 + 3)

41. It as such brings to focus that 0-space in the role of dimension structures manifestation layers (0, 1, 2, 3) for the format of hyper cube 2 which goes to the base of synthesis of a pair of manifestation layers of linear dimensional order

42. It would lead to the feature as that 0-space / 0-space content lump / point as a moving point as a placement at every point along the format of line whose lifting from the format of line (संकलन) Sakalana and re-setting of the lifted points (व्यवकलन) Vyavkalana shall be providing us a reach for the infinity cardinality of the points of a line transiting and transforming into the role for the points (0-space bodies) as dimension fold of 2-space.

43. With it the translation for the line as translation for every point of the line towards the second axes would be providing a transition and transformation from the set up of line into the setup of a surface.
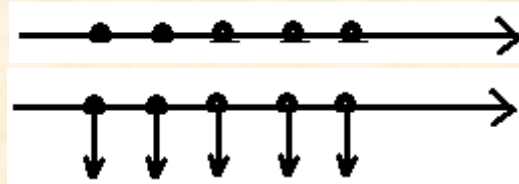
44. Let us revisit the above set up and see, observe and have vision 'विलोकनम्' '*Vilokanam*' /वि / specific /लोक / dimensional space, नम / attainment

45. One may have a pause here and take note that further revisit the above emerged set up for NVF (straight) = NVF (two-space) and to be face to face with the two dimensional frame (+) into the two dimensional frame (x)

46. One may further have a pause here and permit the transcending mind to be face to face with the affine state setting of points along surface accepting a two dimensional frame of the format and feature of the symbol of addition (+), of its own transiting and transforming into the organization within a two dimensional frame of the setting of the symbol of multiplication (x).

47. It is this permissibility for transition and transformation for a two dimensional frame (+) into another two dimensional frame (x) and vice versa which deserve to be comprehended well for its complete appreciation and full imbibing to attain through insight about it as the basic format which shall be inherently being of the features of having its transformation into that of the format of hyper cube 3.

48. One may have a pause here and take note that 9 point fixation for the cube and parallel to it, 9 point fixation of square brings us face to face with set of features of surface being of two faces (NVF (Surface) = NVF (TWO Face) and the super imposition of centers of two faces as a pair of zero dimensional set ups structuring 2-space and therebeing $4 + 4 = 8$ corners for both faces again with their super impositions (for the corners), shall be making them four sets of pair of zero order dimensions and the emerging position NVF (Straight) = NVF (Two space) and still further the emerging position of pair of linear dimensions (edges) structuring 3-space, all together will make out NVF (Square) = NVF (Void cube), a step ahead a chase for transition and transformation to the format of hyper cube 4 having solid boundary of 8 components will be just a sequential transition and transformation steps.

49. The Sutra 13 '(सोपान्त्यद्वयमन्तम्)' will fix the format features for dimensional domains being enveloped within double number of components (A^n: $2n\ B^{n-1}$)

50. Sutra 11 'व्यष्टिसमष्टिः।' will further fix the feature of cube within cube and hyper cube 4 within hyper cube 4 and in general hyper cube n within hyper cube n which shall be manifesting measuring rod for the dimensional domains as synthtetic set up of hyper cubes formats illustratively the measuring rod for 3-space / 3-space domain will be a synthetic set of hyper cubes 0, 1, 2 and 3 in general, the measuring rod of n-space / dimensional domain of hyper cube n would be a synthetic set of hyper cubes 0, 1, 2, 3, --- n

51. One may have a pause here and take note that the domain boundary ration for hyper cube n comes to be An :2^{n-1} and that way the boundary gets fixed in terms of $2n^2$ coordinates

52. This sequentially shall be leading us to (2, 8, 18, 32, 50, 72 for self referral (6-space) domain of 6-space.

53. The emerging self referral (6-space) range values (2, 8, 18, 32, 50, 72) accept re-organization as (2, 2 + 6, 2 + 6 + 10, 2 +6 + 10 + 14, 2 +6 + 10 + 14 + 18, 2 +6 + 10 + 14 + 22.

54. One may have a pause here and take note that value 2 is the summation value of four fold manifestation layer (-1, 0, 1, 2) of hyper cube 1.
55. As such the values 2 +6 + 10 + 14 + 18 + 22 go parallel to the summation values of four fold manifestation layers values of (hyper cube 1, hyper cube 2, hyper cube 3, hyper cube 4, hyper cube 5, hyper cube 6.
56. As such the coordinates values sequence (2, 8, 18, 32, 50, 72) shall be having synthetic measuring rods set ups (hyper cube 1, hyper cube 1 +2, hyper cube 1 +2+3 , hyper cube 1 +2+3+ 4, hyper cube 1 +2+3+4+5.

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Invitation for comments

The text of VMS & T text book class IX (3-space) is enclosing herewith and all are invited to share their comments and suggestions for finalization of the this portion of the text.

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