

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

List 1 Different aspects of Vedic Mathematics

Aspect 32

TO APPRECIATE VEDIC SOURCE OF GANITA SUTRAS

Vedic knowledge has reached us in Devnagri Script. The Devnagri Varanmala has its own organization format. Ganita Sutras Text as well has reached us in Devnagri Script.

The text of Ganita Sutras is availing 283 letters, in all:

Ganita Sutra

(1) एकाधिकेन पूर्वेण । (2) निखिलं नवतश्चरमं दशतः । (3) ऊर्ध्वतिर्यग्भ्याम् । (4) परावर्त्य योजयेत् । (5) शून्यं साम्यसमुच्चये । (6) (आनुरूप्येद्ध) शून्यमन्यत् । (7) संकलनव्यवकलनाभ्याम् । (8) पूरणापूरणाभ्याम् । (9) चलनकलनाभ्याम् । (10) यावदूनम् । (11) व्यष्टिसमष्टिः । (12) शेषाण्यङ्केन चरमेण । (13) सोपान्त्यद्वयमन्तम् । (14) एकन्यूनेन पूर्वेण । (15) गुणितसमुच्चयः । (16) गुणकसमुच्चयः ।

Vedic Systems are to be approached the Vedic way. To have an insight about the organization features of the Text of Ganita Sutras, we have to have appreciation of the organization format features of Devnagri alphabet format.

Fourteen Maheshwara Sutras settle the placements arrangement of 42 letters (9 vowels, 25 varga consonants, 4 antstha consonants and 4 ushmana consonants) of Devnagri alphabet, as under:

DEVNAGRI ALPHABET WITH PLACEMENT VALUES

देवनागरी वर्णमाला

स्वरः Nine vowels

अ इ उ ऋ लृ ए ओ ऐ औ

1 2 3 4 5 6 7 8 9 summation value = 45

5 x 5 वर्गा Varga consonants

क ख ग घ ङ	1 2 3 4 5	summation value = 15
च छ ज झ ञ	2 3 4 5 6	summation value = 20
ट ठ ड ढ ण	3 4 5 6 7	summation value = 25
त थ द ध न	4 5 6 7 8	summation value = 30

प फ ब भ म 5 6 7 8 9 summation value = 35
Grand summation value = 125

अन्तःसथः Anthstha letters:

य र ल व 1 3 5 7 summation value = 16

उष्मणः Ushmana letters:

श स ष ह 2 3 6 9 summation value = 20

(The grand summation value of above all 42 letters = (45+125+16+20) = 206)

The Maheshwara sutras are the sutras of lord Maheshwara, the transcendental lord, and as such, these placement values are taken as divya ank Vyavsta (दिव्य अङ्क व्यवस्था) / transcendental code value of the respective 42 letters of devnagri alphabet. As per this code of above transcendental code value, the formulation Devnagri Varanmala (देवनागरी वर्णमाला) makes a values range as under:

S. No	Letter	TCV	Total TCV
1	इ	6	6
2	ए	6	12
3	वृ	7	19
4	अ	1	20
5	न्	8	28
6	आ	2	30
7	ग्	3	33
8	अ	1	34
9	रृ	3	37
10	ई	4	41
11	व	7	48
12	अ	1	49
13	ँ	2	51
14	ण	7	58
15	अ	1	59
16	म	9	68
17	आ	2	70

18	ल	5	75
19	आ	2	77

The summation value 77 of individual TCV values of 19 letters of formulation Devnagri Varanmala (देवनागरी वर्णमाला), together with the summation value (206) of individual values of above 42 letters of Devnagri alphabet is $77+206 = 283$.

The value 283 is parallel to the total summation value, as tabulated here under of individual TCV values of all the letters of all the 14 'maheshwara sutras', as tabulated here under:

MAHESHWARA SUTRAS WITH TCV VALUES

with ka Shiv leading to TCV value for letter ka being '5'

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.	ज म ङ् ण न म्	(6, 9, 5, 7, 8) (9)	44	143
8.	झ भ ज	(5, 8) (6)	19	162
9.	घ ङ् 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

For further insight about Ganita Sutras, these sutras be visited along with Ganita Upsutras text of 236 letters

Ganita Upsutra

(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 ।

This text is a composition of 236 letters.

For it, the placement values range (1, 2, 3, 4, 5, 6, 7, 8, 9) of above 42 letters of devnagri alphabet, (the values range be approached in terms of their formulations:

(1) एक, (2) द्वय, (3) त्रय, (4) चर्तु, (5) पञ्च, (6) षट, (7) सप्त, (8) अष्ट, (9) नव

These formulations lead to summation values of TCV values of individual letters being (8, 16, 8, 12, 15, 10, 14, 11, 17).

By taking above values (8, 16, 8, 12, 15, 10, 14, 11, 17) of formulations of values range (1, 2, 3, 4, 5, 6, 7, 8, 9), we will be reaching at tabulation for the above 42 letters as under:

S .No	Letter	TCV value	Formu- -lation	TCV of Formu- -lation	Total TCV
1	अ	1	एक	8	8
2	इ	2	द्वय	16	24
3	उ	3	त्रय	8	32
4	ऋ	4	चर्तु	12	44
5	ल्	5	पञ्च	15	59
6	ए	6	षट	10	69
7	ओ	7	सप्त	14	83
8	ऐ	8	अष्ट	11	94
9	औ	9	नव	17	111
10	क	1	एक	8	119
11	ख	2	द्वय	16	135
12	ग	3	त्रय	8	143
13	घ	4	चर्तु	12	155

14	इ	5	पञ्च	15	170
15	च	2	द्वय	16	186
16	छ	3	त्रय	8	194
17	ज	4	चर्तु	12	206
18	झ	5	पञ्च	15	221
19	ञ	6	षट	10	231
20	ट	3	त्रय	8	239
21	ठ	4	चर्तु	12	251
22	ड	5	पञ्च	15	266
23	ढ	6	षट	10	276
24	ण	7	सप्त	14	290
25	त	4	चर्तु	12	302
26	थ	5	पञ्च	15	317
27	द	6	षट	10	327
28	ध	7	सप्त	14	341
29	न	8	अष्ट	11	352
30	प	5	पञ्च	15	367
31	फ	6	षट	10	377
32	ब	7	सप्त	14	391
33	भ	8	अष्ट	11	402
34	म	9	नव	17	419
35	य	1	एक	8	427
36	र	3	त्रय	8	435
37	ल	5	पञ्च	15	450
38	व	7	सप्त	14	464
39	श	2	द्वय	16	480
40	स	3	त्रय	8	488
41	ष	6	षट	10	498
42	ह	9	नव	17	515

With 515 as dimensional order, it will lead to the transcendence range (515, 516, 517, 518, 519) as base fold value 519 which is parallel to the total letters 519 = 283+236 of Ganita Sutras and Ganita Upsutras together.

For further insight of organization format of Ganita Sutras one shall revisit the maheshwara sutras in terms of formulations (1) एक, (2) द्वय, (3) त्रय, (4) चर्तु, (5) पञ्च, (6) षट, (7) सप्त, (8) अष्ट, (9) नव), as under:

S. N	Sutra	TCV value	Formulations values	Total	Grand total
1	अ इ उ ण्	(1, 2, 3) (7)	(8, 16, 8, 14)	46	46

2	ऋ लृ क्	(4, 5) (5)	(14, 15, 15)	44	90
3	ए ओ ङ्.	(6, 7) 5	(10, 14, 15)	39	129
4	ऐ औ च्	(8, 9) (2)	(11, 17, 16)	44	173
5	ह य व र ट	(9, 1, 7, 3) (3)	(17, 8, 14, 8, 8)	55	228
6	ल ण्	(5) (7)	(15, 14)	29	257
7	ज म ङ् ण न ण्	(6, 9, 5, 7, 8) (9)	(10, 17, 15, 14, 11, 17)	84	341
8	झ भ ञ	(5, 8) (6)	(15, 11, 10)	36	377
9	घ ढ ध ष्	(4, 6, 7) (6)	(12, 10, 14, 10)	46	423
10	ज ब ग ड द श्	(4, 7, 3, 5, 6) (2)	(12, 14, 8, 15, 10, 16)	75	498
11	ख फ छ ठ थ च ट त व्	(2, 6, 3, 4, 5, 2, 3, 4) (7)	(16, 10, 8, 12, 15, 16, 8, 12, 14)	111	609
12	क प य	(1, 5) (1)	(8, 15, 8)	31	640
13	श ष स र	(2, 6, 3) (3)	(16, 10, 8, 8)	42	682
14	ह ल्	(9) (5)	(17, 15)	32	714

The formulation Anant (अन्नत) / infinitely infinite, is of TCV value 23. Parallel to it, is the formulation Sahastra (सहस्र) / thousand of TCV value 23. The complement of 714 to make it one thousand is 286. The value 286 as origin takes to value 283 (parallel to total letters of Ganita Sutras) as dimension. Here it also will be relevant to take note that with TCV value of letter (क्) = 1, it will make the total TCV values of formulation of values range 1 to 9, Maheshwara sutras as seven hundred which is parallel to the total number of shalokas of Srimad Bhagwad Geeta, the essence of Vedanta.

And, value (14) is parallel to the number of Maheshwara sutras. Further, value 14 is of organization $14 = 2+3+4+5$, which is parallel to four folds manifestation layer (2, 3, 4, 5) of hyper cube 4, the representative regular body of 4-space.

It will further be relevant to take note that the TCV value of Anubandhas of Maheshwara sutras (7, 1, 5, 2, 3, 7, 9, 6, 6, 2, 7, 1, 3, 5) is of summation value 64 which is the synthesis value of a pair of transcendental ranges of creative order (4-space in the role of dimension of 6-space). The value 64 constitutes a reflection pair with value 46 and value 46 is parallel to gaps value of range of 47 points range. The difference value of 283 letters of sutras and 236 letters of upsutras is precisely 47. This feature brings us face to face with the mathematics of gaps bridging of Ganita upsutras by Ganita Sutras.

The values range (7, 1, 5, 2, 3, 7, 9, 6, 6, 2, 7, 1, 3, 5) of anubandhas in terms of formulations (1) एक, (2) द्वय, (3) त्रय, (4) चर्तु, (5) पञ्च, (6) षट, (7) सप्त, (8) अष्ट, (9)

नव) takes to the values range (14, 8, 15, 16, 8, 14, 17, 10, 10, 16, 14, 8, 8, 15) of summation value (173). The adjustment of this value, out of value 700 leads to residue value being 527 and of it further adjustment for the TCV value of anubudhas (ः) of double presence, the emerging value comes to be 520, one more than 519, the total letters of Ganita Sutras and Ganita Upsutras. It would be relevant to take note that the text of Ganita Upsutra is having one unmanifest letter (ऽ). It will further be relevant to take note that Ganita Sutra 6 having word formulation (आनुरूप्ये), composition of eight letters, being within a bracket implying its two folds contribution in expressed manifest form of the feature of presence and also as unexpressed in unmanifest form of the feature of absence.

Sadhakas fulfilled with intensity of urge to appreciate the vedic source of Ganita Sutras may glimpse and imbibe all these features of the text of Ganita Sutra and Ganita Upsutra together with the features of Maheshwara sutras and of the format of Devnagri alphabet.

