

Sri – Om VEDIC MATHEMATICS AWARENESS YEAR

E-Newsletter Issue no 103 dated 06-02-2015

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'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.

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ISSUE NO 103

Content	Pages
Vedas are written on rays of Sun Let us learn to read it	
Shakala Rigved Samhita Seventh learning step	01-07
Ganita Sutras objective & short Questions Tests and full comprehension tests Test – 9	08-12

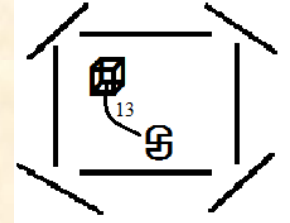
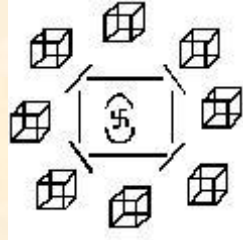
श्री ॐ Sri-Om
VEDAS ARE WRITTEN ON RAYS OF SUN
Let us learn to read it

I Shakala Rigved Samhita FIRST RICHA

“अग्निमीले पुरोहितं यज्ञस्य देवमृत्विजम् ।
होतारं रत्नधातमम् ॥ ‘ऋ१-१-१’”

Recapitulation

Organization foundation format



LEARNING STEPS

1. Organization foundation format
2. Reach from Hyper cube 4 to Hyper cube 5
3. Reach from Hyper cube 5 to Hyper cube 6
4. Hyper cube 4 format for each letter of Devnagri alphabet
5. Chase of 432000 akshras along geometric formats within 4-space
6. Divya Ganga Parvah

SEVENTH LEARNING STEP

**Learn to reach sequential progression from
first syllable (अ, ऀ) to last syllable (ः, इ)
of 432000 syllables range**

Introductory

1. The syllables range of 432000 syllables from its **first syllable (अ, ऀ) to last syllable (ः, इ)** has its unique organization format.
2. Learn about this sequential progression, to have an insight about organization of artifices values progressions along geometric formats.
3. Organization format of Rigved Samhita is of the features of ranges of
 - (i) 10 mandals
 - (ii) 8 austaks
 - (iii) 64 chapters
 - (iv) 85 anuwaks
 - (v) 1028 suktas
 - (vi) 2024 vargas
 - (vii) 10552 richas
 - (viii) 397265 written akshras
 - (ix) 34735 unwritten syllables
 - (x) 432000 total akshras syllables
4. The artifices range (10, 8, 64, 85, 1028, 2024, 10552, 397265, 432000) accepts (1) as the highest common factor.
5. This being so the chase of sequential progression of range 1 to 432000 is to be had by the rule of 'one more than before'.
6. The rule of average distribution and the feature of parallel ranges, will lead us to complex fractions values.
7. Artifice 10 is parallel to creative boundary of 10 components of transcendental (5-space) domain. It also is parallel to features of 10 place value system.
8. Artifices (01, 10) constitute a reflection pair of double digit numbers.
9. Artifice 8 is parallel to 8 components of solid boundary of hyper cube 4.

10. Artifice pair $(1^3, 2^3)$ is parallel to pair of consecutive formats of manifestations along the format of hyper cube 3.
11. The artifices pair $(10, 8)$ is parallel to $(2, 5)$, $(2, 4)$ which is further parallel to the boundary components of hyper cube 5 and hyper cube 4 respectively.
12. The artifices pair $(10, 8)$ is further parallel to 10 directional frame and 8 octants cut within three dimensional frame.
13. Artifice 64 accepts re-organization as $64 = 2^6$
14. Artifice 64 is of value parallel to 64 sub cubes split of 8 octants cut of 3-space.
15. One may have a pause here and take note that organization of Rigved samhita as 10 mandals and 8 austaks on the average makes one mandal being of the range of 1.25 austaks.
16. Further one mandal range comes to be range of 6.4 chapter.
17. Artifice 85 permits re-organization $85 = 8 \times 10 + 5$ parallel to $8 \times 10 = 80$ solids coverage of all the ten creative boundary components of transcendental domain + 5 solid dimensions set up of the dimensional frame of transcendental (5-space) domain.
18. One may have a pause here and take note that range of 1 mandal is parallel to the range of 8.5 anuwaks.
19. Further as that the range of 1 austak is parallel to 10.625 anuwaks.
20. Still further as that range of 1 chapter is parallel to $85 / 64$ anuwaks range.
21. Artifices 1028 and artifice 2024, practically make one sukta being parallel to the range of 2 Vargas
22. Artifice 10552 practically makes out range of 1 mandal being parallel to the range of 1055 richas.
23. Artifice 432000, as such makes out range of 1 mandal being parallel to 43200 akshras / syllables.
24. Artifices pair 432000, 10552 as such makes out 1 richa being practically parallel to 41 akshras / syllables

Nine Place Value System

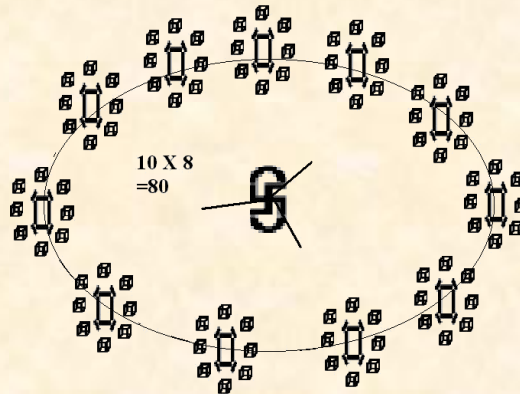
25. Organization as ten mandals on the one hand is parallel to ten place value system.
26. And on the other hand, it is parallel to the format of creative (42^2) boundary of ten components of transcendental (5-space) domain.
27. Here it would be relevant to note that $10 = 1 + 2 + 3 + 4 = 2 + 2 + 2 + 2 + 2$.

28. This as such brings to focus hyper cube 3 (cube) format.
29. Further it also brings to focus the transcendental (5-space) range of five spatial dimensional values range (2, 2, 2, 2, 2).
30. This pair of features, firstly as linear dimensional order of format of hyper cube 3 (cube), and secondly as of five dimensional frame of spatial dimensions, will help us understand as that there is a 9 points fixation for cube (as 8 corner points and 9th center), and also at the same time there would be a ten directional frame for the volume of the cube.
31. Further it also would be relevant to note that center of the cube is a seat of spatial order 4-space which permits transcendence to the transcendental (5-space) base.
32. One may have a pause here and take note that the (4-space) accepts 9 geometries range and parallel to it there are 9 versions of hyper cube 4 while creative 4-space boundary of 5-space accepts split as of ten components.
33. One may further have a pause here and take note that triple artifices (8, 9, 10) is parallel to 8 solid components of boundary of 4-space, 9 geometries range of 4-space / 9 versions of hyper cube 4 / transcendence range (1, 3, 5) and step ahead creative boundary of 5-space being of ten components.
34. With it the gap value of artifices pair (8, 10) is bridged by artifice value 9.
35. One may further have a pause here and take note that amongst others, the prominent features of artifice 9 are:
- (i) There are 9 versions of hyper cube 4
 - (ii) $9 = 1 + 3 + 5$ is parallel to transcendence values triple (1, 3, 5).
 - (iii) Artifices pair (8, 9) accepts re-organization as $2^3, 3^2$
36. One may further have a pause here and take note that double digit numbers of 9 place value get organized along the matrix / grid format 8 x 10 as under

01	02	03	04	05	06	07	08
10	11	12	13	14	15	16	17
18	20	21	22	23	24	25	26
27	28	30	31	32	33	34	35
36	37	38	40	41	42	43	44
45	46	47	48	50	51	52	53
54	55	56	57	58	60	61	62
63	64	65	66	67	68	70	71

72 73 74 75 76 77 78 80
81 82 83 84 85 86 87 88 100

37. One may further have a pause here and take note that it would require $8 \times 10 = 80$ cubes for complete coverage of the entire creative (4-space boundary) of its all ten components of the transcendental (5-space) domain.



38. One may have a pause here and take note that the range of 432000 syllables accepts re-organization as $432000 = 54 \times (8 \times 10) \times 100$.

39. The above organization focuses upon 5400 units of 80 cubes each.

40. Further it also would be relevant to note that $5400 = 8 \times 675$.

41. This organization would further bring to focus that the split of the organization of 432000 akshras syllables can be had uniformly for ten mandals, as well as for 8 austaks and also for 64 chapters.

42. With it the organization of 432000 akshras / syllables remain to be attended for its split as 85 anuwaks, 1028 suktas, 2024 vargas and 10552 richas.

43. Here it would be relevant to note that transcendental (5-space) domain accepts dimensional frame of five solid dimensions and as such the integrity of transcendental (5-space) domain as (enveloped by creative boundary of ten components enveloped within solid boundary of 8 components each) can be chased within solid dimensional frame of five dimensions.

44. With this the organizational chase is to be in respect of (i) 1028 suktas (ii) 2024 vargas, and (iii) 10552 richas.

45. Further, it would be relevant to note that vargas (2024) are practically double of suktas (1028) as $2 \times 1028 = 2056 - 2024 = 32 = 2^5$ is parallel to the contribution of five spatial dimensions values for five dimensional frame of spatial dimensions

46. As such $2 \times 1028 = 2056 = 2024 + 32 = 2024 + 2^5$ will help us appreciate the organization features as suktas and vargas.
47. One may have a pause here and take note that the role of five dimensional frame of five solid dimensions in the organization as 85 anuwaks and further the role of five dimensional frame of five spatial dimensions in the organization of 2024 vargas deserve to be comprehended well.
48. One shall revisit the above organization features of transcendental (5-space) domain enveloped within creative (4-space) boundary in reference to five dimensional frame of solid dimensions and vis-à-vis five dimensional frame of spatial dimensions
49. Further one shall have a pause and take note that $10552 \text{ into } 41 = 432632 = 432000 + 632 = 432000 + 631 + 1$.
50. One may have a pause here and take note that artifice 631 avails digits triple (6, 3, 1) which accept re-organization as (3 + 2 + 1), (2 + 1), (1).
51. One shall further re-capitulate as under learning step no 5:

10. Here it also would be relevant to note that $12 \times 33 \times 33 \times 33 = 431244$ and $13 \times 33 \times 33 \times 33 = 467181$

11. The 12 edged cube set up and 13 edged cube set up are of values difference range $33 \times 33 \times 33 = 35937$.

12. Further as that $432000 - 431244 = 756$

13. Still further as that out of 432000 akshras (syllables) of text of Rigved samhita, 34735 are un-manifest (unwritten letters)

14. One may have a pause and be face to face with the following artifices

- (i) 432000*
- (ii) $432000 = 431244 + 756$*
- (iii) 34735*
- (iv) 35937*
- (v) 432 and 756*
- (vi) $12 \times 33 \times 33 \times 33$*
- (vii) $13 \times 33 \times 33 \times 33$*

15. One may further have a pause here and revisit the set ups of

- (i) Hyper cube 4 domain*
- (ii) 12 edged cube*
- (iii) 13 edged cube*
- (iv) Solid order (3-space in the role of dimension)*

- (v) *Hyper cube 5*
- (vi) *Five dimensional frame of solid dimensions*
- (vii) *Split of a three dimensional frame into a pair of three dimensional frames of half dimensions.*
- (viii) *Linear dimension (1-space in the role of dimension / hyper cube 1 domain as dimension)*
- (ix) *Dimensional frame of three linear dimension (three dimensions of format of hyper cube 1 domain)*
- (x) *Split for domain fold within three dimensional frame of three dimensions, each of artifice value 33*

In the light of the above geometric format, one shall revisit the set up of 33 consonants with 4-space with hyper cube 4 format.

52. Further it also would be relevant to note that 12 vowels range (अ आ इ ई उ ऊ ऋ लृ ए ओ ऐ औ) and 13 vowels range (अ आ इ ई उ ऊ ऋ ॠ लृ ए ओ ऐ औ) together with 33 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 य व र ल श ष स ह) shall be leading us and would be providing us a reach for sequential progression of 432000 syllables as to be of above features along the transcendental (5-space) domain.

to be continued....

*

05-02-2015, Dr. S. K. Kapoor, (Ved Ratan)

*Ganita Sutras objective &
short questions Tests
and full comprehension tests*

Tests

1. General features tests
2. About Arithmetic operations on first principles
3. About broad coverage domain of Ganita Sutras
4. About Ganita Sutra 5
5. About Ganita Sutra 6
6. About pure and applied values of Ganita Sutra 1
7. About text of Ganita Sutra 1 (GS1)
8. Word formulation specific about 'समुच्चय' samuccaye

Test - 9

Letters specifics

1. The text of Ganita Sutra and Upsutras avails 519 letters in all.
2. Ganita Sutras text avails 283 letters while Ganita Upsutras text avails 236 letters.
3. Ganita Sutras text of 283 letters has split of 119 vowels and 164 consonants and yama letters.
4. Ganita Upsutras text of 236 letters is of 100 vowels and 136 consonants (including yama letters)
5. Ganita Sutras text avails 22 consonants 7 vowels and 2 yama letters.
6. Likewise Ganita Upsutras text as well avails 22 consonants 10 vowels and 2 yama letters.
7. However the difference lies in different ranges of consonants being availed by Ganita Sutras and Ganita Upsutras respectively.
8. The consolidated table of distribution of frequencies of all the 24 consonants 2 yama letters and 10 vowels comes to be as under:-

**Consolidated table of the distribution of all the
26 consonants In the text of 13 Ganita Upsutras**

Sr. no.		Sutras	Upsutras	Total	Grand Total	Consolidated
1	अ	66	51	117	117	117
2	आ	15	12	27	144	144
3	इ	8	6	14	158	158

क											1					1	
ख		1			2				1		1			2	2	9	
ग				1												1	
घ																	
ङ											2					2	
च	1							2			2		1	1	1	8	
छ		2	1	2		1						2		1		9	
ज																	
झ		1								1		1				3	
ञ	1		1													2	
ट	1	2			1	3	1		2	1		1	2	3		17	
ठ	1			1		1		2				1	1			7	
ड			1			1	1	1								4	
ढ		1	1		2	1	1	1	1	1	1	1	2		1	1	15
ण	1		2	3	3	3	2	1	1	1	1	1	3	1	1	1	25
त	1	1	2	2		1		2				1		1		11	
थ		1					3		2							6	
द		1	1	1			2			1	1		1	1		9	
ध		2			1	1						1				5	
न					2		1				1		1		1	1	7
प											2	1				3	
·	-	2	-	-	1	-	1	-	-	-	-	-	-	-	-	-	4
:	-	1	-	-	-	-	-	-	-	-	1	-	-	-	1	1	4
	8	16	10	10	12	11	14	9	9	5	9	11	13	9	9	9	

Consolidated table of distribution of all the 10 vowels in the text of 16 Ganita Sutras

S	अ	आ	इ	ई	उ	ऊ	ऋ	ए	ऐ	ओ	T	GT
1	2	1	1		1			3			8	8
2	10		2								12	20
3	2	1	1			1					5	25
4	3	1	1					1		1	7	32
5	4	1			1	1		1			8	40
6	3	1			1	2		1			8	48
7	8	2									10	58
8	2	3				2					7	65
9	5	2									7	72
10	2	1				1					4	76
11	3		2								5	81
12	5	1						3			9	90
13	5	1								1	7	97
14	3					2		3			8	105
15	4		1		2						7	112
16	5				2						7	119

T	66	1 5	8		7	9		12		2	119	---
GT	66	8 1	8 9		9 6	10 5		11 7		11 9		

Consolidated table of the distribution of all the 26 consonants In the text of 13 Ganita Upsutras

	1	2	3	4	5	6	7	8	9	10	11	12	13	T
क्				2			1	1		1		1	2	8
ख्														
गु				1			1			2			4	8
ङ														
च							1							1
च्		1					1							2
ज		1								1			2	4
झ					1					1			2	4
ण	1													1
त्		1	2	2		1	3	1	1		1			12
थ														
द			2			2	2	1						7
ध														
न	1		4	1	1	2	2	1	1		2	1		16
प	1			1				1		1	2		2	8
फ											1			1
भ			2		1	1					1	1		6
भृ	1	1	4	1		1	4	2	2	1	1		2	20
म	1						1	1	1					4
य				1							1	1		3
र				1	1	2	3		1			1		9
श्		2						1						3
स		1		1						1	1		2	6
ष		2			1									3
.		1		1		1	2							5
:		1		1						1			2	5
5	11	14	13	5	10	21	9	6	9	10	5	18	5	136

Consolidated table of distribution of all the 10 vowels in the text of 13 Ganita Upsutras

	अ	आ	इ	ई	उ	ऊ	ऋ	ए	ऐ	ओ	T	GT
1	1	1			1	1			1		5	5
2	4		1					2			7	12
3	4	3						2			9	21
4	4	1			1			1	1		8	29
5	2							1			3	32
6	4	2				2					8	40
7	8	2		1		2	1	1		1	16	56

8	4		1					1		1	7	63
9	3							1		1	5	68
10	4		1		2						7	75
11	3	3								1	7	82
12	2		1							1	4	86
13	8		2		4						14	100
T	51	12	6	1	8	5	1	9	2	5	100	
G TI	51	63	69	70	78	83	84	93	95	100		

Test your reach

1. It would be a blissful exercise to reach at the above tables from original source of the text of Ganita Sutras and of Ganita Upsutras.
2. There are 219 vowels frequencies and 300 consonants frequencies. The artifices pair (219, 300) accepts re-organization as 3×73 , 3×100 . Further as that $100 = 73 + 27$. The first vowel is of frequency $119 = 3 \times 37$. $37 + 27 = 64 = 4^3$, $27 = 3^3$, (73, 37) constitute reflection pair. $(73 + 37) = 110 = 55 + 55$. Revisit above features and evaluate your reach.
3. Revisit the frequencies of 36 letters being availed by the text of Ganita Sutras and Upsutras.
4. Revisit the script form, frame and format of 36 letters being availed by the text of Ganita Sutras and Upsutras.

* **06-02-2015**

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