
Phase 8
VALUES (Axioms & Postulates)
OF VEDIC GANITA SUTRAS

Phase 8.6
Ganita Sutra 4 and Ganita Upsutra 4
‘परावर्त्य योजयेत्’ Paravartya Yojeyate’
‘केवलैः सप्तकं गुण्यात् ।’ ‘Kewele Sapatkam Gunyat’

Dr. Sant Kumar Kapoor,
Ved Ratan

Abstract

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Phase 8

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Ganita Sutra 4 and Ganita Upsutra 4

‘परावर्त्य योजयेत्’ Paravartya Yojeyate’

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Abstract

Vedic Ganita Sutras text is in Devnagri. Devnagri alphabet format is meant for human mouth articulated sounds for human intelligence to be parallel with consciousness regulation of Existence Phenomenon frames to glimpse and imbibe the ultimate basis base source, unfolding itself in sequential phases in dimensional frames synthesizing for transition through transcendence from sound frequencies into light frequencies. Vedic mathematics approaches dimensional frames parallel with artifices of numbers as a ten place value system of 9 numerals of Sathapatya of 9 versions of spatial order 4-space manifesting 4-space boundary of ten components of solid order 5-space. The sequential unfolding of artifices of numbers organized along ten place value format parallel with phenomenon of 4-space boundary components taking of from 5-space and playing the role of creative (4-space) dimension of source basis base self referral (6-space) domain of 7-space origin. Ganita Sutras and Upsutras text specifically formulates 0, 1, 2, 7, 9 and 10 and accepts 3, 4, 5, 6, 8 for mathematizing 7 of Sathapatya of 7-space for the reach of 9-space. The values range 1 to 10 is of 16 factors and values range of 1 to 16 is of 29 factors, parallel to which is the organization of text of 16 Ganita Sutras and 13 Ganita Upsutras, together manifesting integrated format of 29 sequential unfolding phases. The value 29 is parallel with TCV value of formulation of creator Brahma ब्रह्मा and value 16 is parallel with TCV value formulation Jeev जीव (Being) while value 13 is parallel

with TCV value of Chit चित्त (consciousness). The spatial order, quadruple dimensional frame is of value 16 parallel with unfolding (as 5 + 6 + 5) as 6-space origin of 5-space domain of full unit of splitting feature of a pair of half unit 5-space domains within spatial order creator (4-space).

I

Background recapitulation

1. Vedic Ganita Sutras वैदिक गणित सूत्राणि as triple formulations 'i' वैदिक Vedic (ii) गणित Ganit (iii) सूत्राणि Sutrani are of TCV values, (वैदिक) = 25, (गणित) = 18, (सूत्राणि) = 25, together of summation value 68.
2. It is parallel with TCV value of five elements formulation (पञ्च महाभूतः); (i) TCV (पृथिवि / Earth) = 25, TCV (आप / Water) = 8, TCV (अग्नि / Fire) = 14, TCV (वायु / Air) = 13 and TCV (सूर्य / Space) = 13.
3. It is also parallel with four fold split spectra of 19-space content (D19) : (19, 17, 17, 15).
4. It is also parallel with TCV value of parallel with text of Ganita Sutra 1, TCV (एकाधिकेन पूर्वेण) = 34 + 34 = 68.
5. Within 4-space, Ka Brahma, TCV (क्) = 4 and TCV (र्) = 3, TCV value transforms from 68 to 40 + 35 = 75.
6. It is further parallel with the structural component of four of the eight sub cubes of cube (27 + 18 + 18 + 12).
7. Still further value 75 is parallel with the summation value of five fold transcendental range (13, 14, 15, 16, 17).
8. The middle placement value '15', as an expression of a pair of digits '5' and '1' of 10, is of respective values 14, 13, 12, 11 for 9, 8, 7 and 6 place values.

Table 1

Table of Number value 15 of ten place value system of 5 and 1 digits is of respective values 14, 13, 12, 11 of 9, 8, 7, 6 place value

N = 10		10	11	12	13	14	15	16	17	18	19	20
---------------	--	-----------	-----------	-----------	-----------	-----------	-----------	-----------	-----------	-----------	-----------	-----------

N = 9	9	10	11	12	13	14	15	16	17	18	19
N = 8	8	09 / 10	10	11	12	13	14	15	16	17	18
N = 7	7	08 / 10	09	10	11	12	13	14	15	16	17
N = 6	6	07 / 10	08	09	10	11	12	13	14	15	16

And it is parallel with value 20, 19, 18, 17, 16 for 15, 14, 13, 12 and 11 place values.

Table 2

Number value 15 of ten place value system of 5 and 1 digits is of respective values 20, 19, 18, 17, 16 for 15, 14, 13, 12 and 11 place values

N = 10		10	11	12	13	14	15	16	17	18	19	20
---------------	--	-----------	-----------	-----------	-----------	-----------	-----------	-----------	-----------	-----------	-----------	-----------

N = 15	15 / 10	16	17	18	19	20	21	22	23	24	25
N = 14	14 / 10	15	16	17	18	19	20	21	22	23	24
N = 13	13 / 10	14	15	16	17	18	19	20	21	22	23
N = 12	12 / 10	13	14	15	16	17	18	19	20	21	22
N = 11	11 / 10	12	13	14	15	16	17	18	19	20	21

9. Number value 4 is of Sathapatya organization features :

- (i) $4 = 2 + 2$, (ii) $4 = 2 \times 2$, (iii) $4 = (-2) \times (-2)$
- (ii) $2^4 = 4^2$
- (iii) 4-space is of spatial order (2-space as dimension).
- (iv) $4 = (2, 2)$, synthesis value of a pair of spatial dimensions.
- (v) 2-space is of 0 order (0 space as dimension of 2-space).
- (vi) and $2 = (0, 0)$ synthesis value of pair of 0 order dimensions.

10.2-space is dimensional order of 4-space and 0-space is dimensional order of dimensional order of 4-space. 4-space itself is of creative (4-space) order of 6-space.

11. Number value 6 is of Sathapatya organization feature

- (i) $6 = 1 + 2 + 3$
- (ii) $6 = 1 \times 2 \times 3$
- (iii) $(-6) = (-1) + (-2) + (-3)$
- (iv) $(-6) = (-1) \times (-2) \times (-3)$
- (v) (-6) space is dimensional order of (-4) space.
- (vi) (-8) space is dimensional order of (-6) space.
- (vii) (-8) space is dimensional order of (-8) space and also it is dimensional order of dimensional order of (-4) space.

12. The Sathapatya features $(2 \times 2) = (-2) \times (-2)$ and $(-1) \times (-2) \times (-3) = (-6)$ while $(1 \times 2 \times 3) = 6$ and $(-2) + (-2) = (-4)$ brings to focus the characteristics features of 4-space and (-4) space on the one hand and of (6) space and (-6) space. Ganita Sutras 4, 5 and 6 together with Ganita Upsutras (4, 5 and 6), in their placements in integrated format of Ganita Sutras and Upsutras give a mathematical chase of all these characteristics features of number value 4 and 6 as 4-space and 6-space.

13. Ganita Sutra 4 is of seventh placement in the integrated format of 29 placement of 16 Sutras and 13 Upsutras. Ganita Upsutra 4 is of 8th placement in integrated format of Ganita Sutras and Ganita Upsutras :

SN	Sutra / Upsutra
1	Ganita Sutra 1
2	Upsutra 1
3	Ganita Sutra 2
4	Upsutra 2
5	Ganita Sutra 3
6	Upsutra 3
7	Ganita Sutra 4
8	Upsutra 4

14. Four-space is creator space. It is dimensional order of 6-space. Brahma is overlord of 4-space. Vishnu is overlord of 6-space. The creation and dissolution of entire Existence Phenomenon is from and within 6-space by its overlord Vishnu Puranas (पुराण) chase it in eighteen steps as eighteen Puranas, first being Brahma Puran (ब्रह्म पुराण) and last eighteenth being Brahmand Puran (ब्रह्माण्ड पुराण). TCV (ब्रह्म पुराण) = $28 + 21 = 49$ and TCV (ब्रह्माण्ड पुराण) is $43 + 21 = 64$. The values pair (49) and (64) is of organization format (7^2 and 8^2). The difference value of $64 - 49 = 15$ is parallel with TCV (हरि Hari). TCV value (हरि) is 15 and TCV value (विष्णु) is 25. The values range 1 to 15 is of factors range 1 to 25.

Table 3

Number value 15 of ten place value system of 5 and 1 digits is of respective values 25, 24, 23, 22, 21 for 20, 19, 18, 17, 16 place values

N = 10	10	11	12	13	14	15	16	17	18	19	20
---------------	-----------	-----------	-----------	-----------	-----------	-----------	-----------	-----------	-----------	-----------	-----------

N = 15	15 / 10	16	17	18	19	20	21	22	23	24	25
N = 14	14 / 10	15	16	17	18	19	20	21	22	23	24
N = 13	13 / 10	14	15	16	17	18	19	20	21	22	23
N = 12	12 / 10	13	14	15	16	17	18	19	20	21	22
N = 11	11 / 10	12	13	14	15	16	17	18	19	20	21

15. Number value 20 is parallel with TCV (वेद Ved) = 20. It is 20 placement value of 19 numerals is at the format of Vedas.

16. Swami Bharti Krishna Tirtha ji maharaj in Book : Vedic Mathematics 'Sixteen Simple Mathematical Formulae from the Vedas', in its page 1 of chapter 1 gives spectacular illustration of conversion of vulgar fraction

1

Actual Applications of the Vedic Sūtras to Concrete Mathematical Problems

A SPECTACULAR ILLUSTRATION

For the reasons just explained immediately hereinbefore let us take the question of the conversion of vulgar fractions into their equivalent decimal form.

FIRST EXAMPLE

Case I Let us first deal with the case of a fraction say $1/19$.
 $1/19$ whose denominator ends in 9.

BY THE CURRENT METHOD

$$\begin{array}{r}
 19 \overline{) 100.052631578} \\
 \underline{95} \\
 50 \\
 \underline{38} \\
 120 \\
 \underline{114} \\
 60 \\
 \underline{57} \\
 30 \\
 \underline{19} \\
 110 \\
 \underline{95} \\
 150 \\
 \underline{133} \\
 170 \\
 \underline{170} \\
 0
 \end{array}$$

BY THE VEDIC ONE-LINE MENTAL METHOD

A. FIRST METHOD

$$\begin{array}{r}
 \frac{1}{19} = .052631578 \\
 \left. \begin{array}{r}
 11 \\
 947368421 \\
 111
 \end{array} \right\}
 \end{array}$$

B. SECOND METHOD

$$\begin{array}{r}
 \frac{1}{19} = .052631578/947368421 \\
 11 / 111
 \end{array}$$

This is the whole working. And the *modus operandi* is explained in the next few pages.

II

Ganita Sutra 4 and Ganita Upsutra 4

8. Text of Ganita Sutra 4 'परावर्त्य योजयेत्'
9. Formulation 'परावर्त्य'
 - (iii) Eight folds table 1 of formulation
 - (iv) Cyclic phases table 2 of formulation
10. Formulation 'योजयेत्'
 - (iii) Eight folds table 3 of formulation
 - (iv) Cyclic phases table 4 of formulation
11. Text of Ganita Upsutra 4 'केवलैः सप्तकं गुण्यात्'
12. Formulation 'केवलैः'
 - (iii) Eight folds table 5 of formulation
 - (iv) Cyclic phases table 6 of formulation
13. Formulation 'सप्तकं'
 - (iii) Eight folds table 7 of formulation
 - (iv) Cyclic phases table 8 of formulation
14. Formulation 'गुण्यात्'
 - (iii) Eight folds table 9 of formulation
 - (iv) Cyclic phases table 10 of formulation

Table 4

Table of ten folds of formulation 'परावर्त्य'

W = Word, S = Syllable, L = Letters, T = TCV value, TT = transcendence through dimensional frames (vowels) FF = pronouncing frequency F = Formulation, H = Sathapatya, R = transcendental range SR = Synthesis of transcendental ranges

SN	1	2	3	4	5	6	7	8	9	10
Fold	W	S	L	T	TT	FF	F	H	R	SR
Value	1	4	10	27	57	247	115	88	235	497
Total	1	5	15	42	99	346	461	549	784	1281

Table 5

Cyclic phased values of syllables of formulation 'परावर्त्य'

SN = Row of syllables,

SN Column of cyclic phased values

Cg = Cyclic phase value

Gt = Grant total

SN	1	2	3	4	Cg	Gt
1	6	5	8	8	27	27
2	1	3	0	2	6	33
3	2	3	2	1	8	41
4	1	1	1	1	4	45
5	0	0	0	0	0	45

Total cycle phases of formulation are '5'.

Table 6

Table of ten folds of formulation 'योजयेत्'

W = Word, S = Syllable, L = Letters, T = TCV value, TT = transcendence through dimensional frames (vowels) FF = pronouncing frequency F = Formulation, H = Sathapatya, R = transcendental range SR = Synthesis of transcendental ranges

SN	1	2	3	4	5	6	7	8	9	10
Fold	W	S	L	T	TT	FF	F	H	R	SR
Value	1	3	7	25	165	165	72	82	195	415
Total	1	4	11	36	201	366	438	520	715	1130

Table 7

Cyclic phased values of syllables of formulation 'योजयेत्'

SN = Row of syllables,

SN Column of cyclic phased values

Cg = Cyclic phase value

Gt = Grant total

SN	1	2	3	Cg	Gt
1	8	5	12	25	25
2	3	7	4	14	39
3	4	3	1	8	47
4	1	2	3	6	53
5	1	1	2	4	57
6	0	1	1	2	59
7	1	0	1	2	61
8	1	1	0	2	63
9	0	1	1	2	65
10	1	0	1	2	67

Total cycle phases of formulation are '7 + 3 = 10'.

Grand total of all cyclic phased value 61 + 6 = 67

(v) Text of Ganita Upsutra 4

Table 8

Table of ten folds of formulation 'केवलैः'

W = Word, S = Syllable, L = Letters, T = TCV value, TT = transcendence
 through dimensional frames (vowels) FF = pronouncing frequency F = Formulation,
 H = Sathapatya, R = transcendental range SR = Synthesis of transcendental ranges

SN	1	2	3	4	5	6	7	8	9	10
Fold	W	S	L	T	TT	FF	F	H	R	SR
Value	1	3	7	41	576	181	79	150	275	591
Total	1	4	11	52	628	809	888	1038	1313	1904

Table 9

Cyclic phased values of syllables of formulation 'केवलैः'

SN = Row of syllables,

SN Column of cyclic phased values

Cg = Cyclic phase value

Gt = Grant total

SN	1	2	3		T	Cg	Gt	
1	7	8	26		26	41	41	
2	1	18	19		45	38	79	
3	17	1	18		63	36	115	
4	16	17	1		64	34	149	
5	1	16	15		79	32	181	
6	15	1	14		93	30	211	
7	14	13	1		94	28	239	
8	1	12	13		107	26	265	
9	11	1	12		119	24	289	
10	10	11	1		120	22	311	
11	1	10	9		120	20	331	
12	9	1	8		129	18	349	
13	8	7	1		137	16	365	
14	1	6	7		138	14	379	
15	5	1	6		145	12	391	
16	4	5	1		151	10	401	
17	1	4	3		152	8	409	
18	3	1	2		155	6	415	
19	2	1	1		157	4	419	

20	1	0	1		158		2	421
21	1	1	0		159		2	423
22	0	1	1		159		2	425
23	1	0	1		160		2	427

Total cycle phases of formulation are '20 + 3 = 23'.
Grand total of all cyclic phased value 421 + 6 = 427

Table 10

Table of ten folds of formulation 'सप्तकं'

W = Word, S = Syllable, L = Letters, T = TCV value, TT = transcendence through dimensional frames (vowels) FF = pronouncing frequency F = Formulation, H = Sathapatya, R = transcendental range SR = Synthesis of transcendental ranges

SN	1	2	3	4	5	6	7	8	9	10
Fold	W	S	L	T	TT	FF	F	H	R	SR
Value	1	3	8	25	48	55	78	84	205	435
Total	1	4	12	37	85	140	218	302	507	942

Table 11

Cyclic phased values of syllables of formulation 'सप्तकं'

SN = Row of syllables,

SN Column of cyclic phased values

Cg = Cyclic phase value

Gt = Grant total

SN	1	2	3		Cg	Gt
1	4	10	11		25	25
2	6	1	7		14	39
3	5	6	1		12	51
4	1	5	4		10	61
5	4	1	3		8	69
6	3	2	1		6	75
7	1	1	2		4	79
8	0	1	1		2	81
9	1	0	1		2	83
10	1	1	0		2	85
11	0	1	1		2	87

Total cycle phases of formulation are '8 + 3 = 11'.
Grand total of all cyclic phased value 81 + 6 = 87

Table 12

Table of ten folds of formulation 'गुण्यात्'

W = Word, S = Syllable, L = Letters, T = TCV value, TT = transcendence
 through dimensional frames (vowels) FF = pronouncing frequency F = Formulation,
 H = Sathapatya, R = transcendental range SR = Synthesis of transcendental ranges

SN	1	2	3	4	5	6	7	8	9	10
Fold	W	S	L	T	TT	FF	F	H	R	SR
Value	1	2	6	20	-9	140	66	68	160	340
Total	1	3	9	29	20	160	226	294	454	794

Table 13

Cyclic phased values of syllables of formulation 'गुण्यात्'

SN = Row of syllables,

SN Column of cyclic phased values

Cg = Cyclic phase value

Gt = Grant total

SN	1	2		Cg	Gt
1	6	14		20	20
2	8	8		16	36
3	0	0		0	36

Total cycle phases of formulation are '2 + 1 = 3'.

Grand total of all cyclic phased value 36 + 0 = 36

III**Integrated format placement of Ganita Sutra 4 and Ganita Upsutra 4**

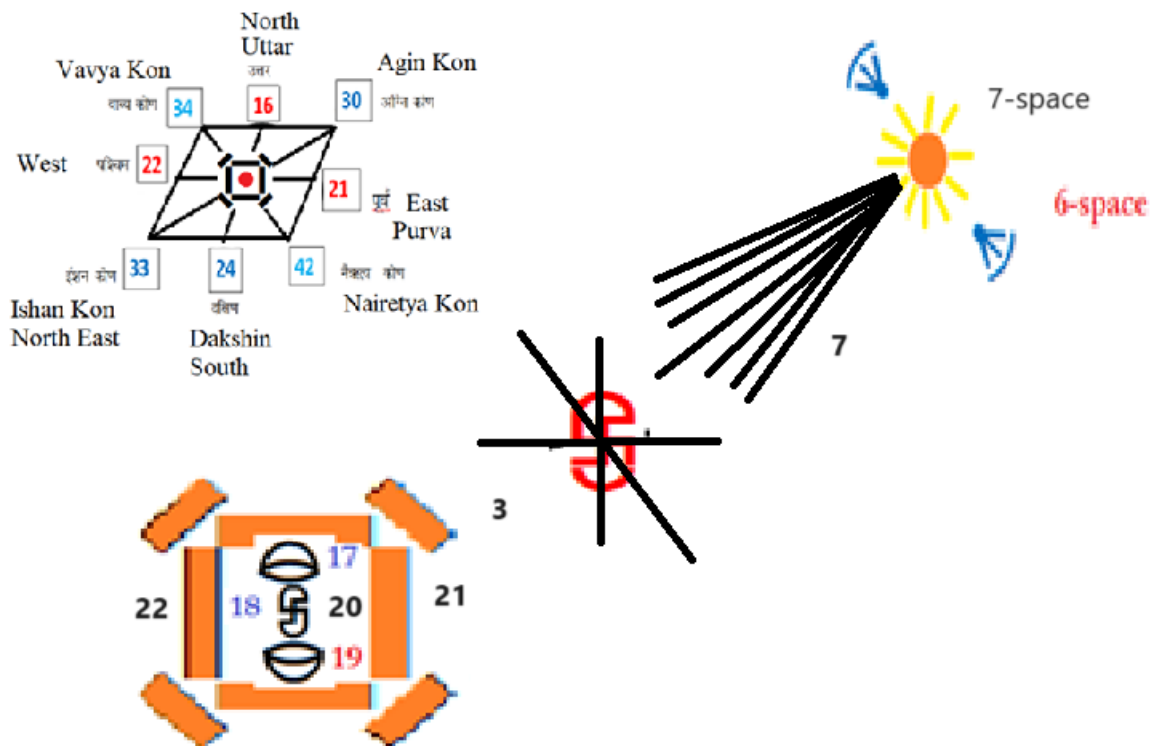
SN = placement serial of Sutra / Upsutra

SN	Sutra / Upsutra
1	Ganita Sutra 1
2	Upsutra 1
3	Ganita Sutra 2
4	Upsutra 2
5	Ganita Sutra 3
6	Upsutra 3
7	Ganita Sutra 4
8	Upsutra 4

IV

Sequential placement of eight fold and cyclic phases

1. Transcendental (5-space) content flow from 7-space origin of Surya / Sun (6-space body) manifests within creator 4-space a eight directional frame and of cyclic phases of manifestation within eight directional frame.



V

Formulation wise TCV values folds and cyclic phases of Ganita Sutra 4

I

Ten folds of formulation

i. Of 'परावर्त्य'

Table 14 of ten folds

W = Word, S = Syllable, L = Letters, T = TCV value, TT = transcendence through dimensional frames (vowels) FF = pronouncing frequency F = Formulation, H = Sathapatya, R = transcendental range SR = Synthesis of transcendental ranges

SN	1	2	3	4	5	6	7	8	9	10
Fold	W	S	L	T	TT	FF	F	H	R	SR
Value	1	4	10	27	57	247	115	88	235	497
Total	1	5	15	42	99	346	461	549	784	1281

Table 15 of cyclic phases

SN	1	2	3	4	Cg	Gt
1	6	5	8	8	27	27
2	1	3	0	2	6	33
3	2	3	2	1	8	41
4	1	1	1	1	4	45
5	0	0	0	0	0	45

II

Table of ten folds

ii. Of 'योजयेत्'

I

Table 16 of ten folds

W = Word, S = Syllable, L = Letters, T = TCV value, TT = transcendence
 through dimensional frames (vowels) FF = pronouncing frequency F = Formulation,
 H = Sathapatya, R = transcendental range SR = Synthesis of transcendental ranges

SN	1	2	3	4	5	6	7	8	9	10
Fold	W	S	L	T	TT	FF	F	H	R	SR
Value	1	3	7	25	165	165	72	82	195	415
Total	1	4	11	36	201	366	438	520	715	1130

Table 17 of cyclic phases

SN	1	2	3		Cg	Gt
1	8	5	12		25	25
2	3	7	4		14	39
3	4	3	1		8	47
4	1	2	3		6	53
5	1	1	2		4	57
6	0	1	1		2	59
7	1	0	1		2	61
8	1	1	0		2	63
9	0	1	1		2	65
10	1	0	1		2	67

iii. Of complete text

I

Table 18 of ten folds of

Of two formulations of Ganita Sutra 4

F1 = first formulation, F2 = Second formulation

Ct = Complete text

F1	1	5	15	42	99	346	461	549	784	1281
----	---	---	----	----	----	-----	-----	-----	-----	------

F2	1	4	11	36	201	366	438	520	715	1130
----	---	---	----	----	-----	-----	-----	-----	-----	------

Ct	2	9	26	78	300	712	899	769	1499	2411
----	---	---	----	----	-----	-----	-----	-----	------	------

Grand total of complete Text of Ganita Sutra 4 formulation

VI

Formulation wise TCV values folds and cyclic phases of Ganita Upsutra 4

I

Ten 19 folds of formulation

iv. Of 'केवलैः'

Table of ten folds

W = Word, S = Syllable, L = Letters, T = TCV value, TT = transcendence through dimensional frames (vowels) FF = pronouncing frequency F = Formulation, H = Sathapatya, R = transcendental range SR = Synthesis of transcendental ranges

SN	1	2	3	4	5	6	7	8	9	10
Fold	W	S	L	T	TT	FF	F	H	R	SR
Value	1	3	7	41	576	181	79	150	275	591
Total	1	4	11	52	628	809	888	1038	1313	1904

Table 20 of cyclic phases

SN	1	2	3		T	Cg	Gt	
1	7	8	26		26	41	41	
2	1	18	19		45	38	79	
3	17	1	18		63	36	115	
4	16	17	1		64	34	149	
5	1	16	15		79	32	181	
6	15	1	14		93	30	211	
7	14	13	1		94	28	239	
8	1	12	13		107	26	265	
9	11	1	12		119	24	289	
10	10	11	1		120	22	311	
11	1	10	9		120	20	331	
12	9	1	8		129	18	349	

13	8	7	1		137	16	365	
14	1	6	7		138	14	379	
15	5	1	6		145	12	391	
16	4	5	1		151	10	401	
17	1	4	3		152	8	409	
18	3	1	2		155	6	415	
19	2	1	1		157	4	419	
20	1	0	1		158	2	421	
21	1	1	0		159	2	423	
22	0	1	1		159	2	425	
23	1	0	1		160	2	427	

Ten folds of formulation

v. Of 'सप्तकं'

Table 21 of ten folds

W = Word, S = Syllable, L = Letters, T = TCV value, TT = transcendence
through dimensional frames (vowels) FF = pronouncing frequency F = Formulation,
H = Sathapatya, R = transcendental range SR = Synthesis of transcendental ranges

SN	1	2	3	4	5	6	7	8	9	10
Fold	W	S	L	T	TT	FF	F	H	R	SR
Value	1	3	8	25	48	55	78	84	205	435
Total	1	4	12	37	85	140	218	302	507	942

Table 22 of cyclic phases

SN	1	2	3		Cg	Gt
1	4	10	11		25	25
2	6	1	7		14	39
3	5	6	1		12	51
4	1	5	4		10	61
5	4	1	3		8	69
6	3	2	1		6	75
7	1	1	2		4	79
8	0	1	1		2	81
9	1	0	1		2	83
10	1	1	0		2	85
11	0	1	1		2	87

Ten folds of formulation

vi. Of 'गुण्यात्'

Table 23 of ten folds

W = Word, S = Syllable, L = Letters, T = TCV value, TT = transcendence through dimensional frames (vowels) FF = pronouncing frequency F = Formulation, H = Sathapatya, R = transcendental range SR = Synthesis of transcendental ranges

SN	1	2	3	4	5	6	7	8	9	10
Fold	W	S	L	T	TT	FF	F	H	R	SR
Value	1	2	6	20	-9	140	66	68	160	340
Total	1	3	9	29	20	160	226	294	454	794

Table 24 of cyclic phases

SN	1	2		Cg	Gt
1	6	14		20	20
2	8	8		16	36
3	0	0		0	36

Table 25 of ten folds of

Of two formulations of Ganita Upsutra 4

F1 = first formulation, F2 = Second formulation F3 = Third Formulation

Ct = Complete text

F1	1	4	11	52	628	809	888	1038	1313	1904
-----------	---	---	----	----	-----	-----	-----	------	------	------

F2	1	4	12	37	85	140	218	302	507	942
----	---	---	----	----	----	-----	-----	-----	-----	-----

F3	1	3	9	29	20	160	226	294	454	794
----	---	---	---	----	----	-----	-----	-----	-----	-----

Ct	3	11	32	118	733	1109	1332	1634	2274	3640
----	---	----	----	-----	-----	------	------	------	------	------

Grand total of complete Text of Ganita Upsutra 4 formulation

VII

**Integrated format placements of Ganita Sutra 4
and Ganita Upsutra 4 folds and cyclic phases**

VII.1

Ganita Sutra 4 text is a composition of two words while Ganita Upsutra 4 text is a composition of three words. The pair of words formulations of Sutra bridge the gaps of

triple words formulations of Upsutra. This makes a format of five words formulations of ten folds and cyclic phases, in terms of which transition and transformation from Ganita Sutra 4 to Ganita Sutra 5 takes place. Hereunder at the cost of repeated reproduction of folds and cyclic phases of the formulation for pointed attention are being sequentially reproduced hereunder :-

Formulation 'केवलैः'

Table 26

Table of ten folds of formulation 'केवलैः'

SN	1	2	3	4	5	6	7	8	9	10
Fold	W	S	L	T	TT	FF	F	H	R	SR
Value	1	3	7	41	576	181	79	150	275	591
Total	1	4	11	52	628	809	888	1038	1313	1904

Table 27

Cyclic phased values of syllables of formulation 'केवलैः'

SN = Row of syllables,

SN Column of cyclic phased values

Cg = Cyclic phase value

Gt = Grant total

SN	1	2	3	T	Cg	Gt
1	7	8	26	26	41	41
2	1	18	19	45	38	79
3	17	1	18	63	36	115
4	16	17	1	64	34	149
5	1	16	15	79	32	181
6	15	1	14	93	30	211
7	14	13	1	94	28	239
8	1	12	13	107	26	265
9	11	1	12	119	24	289
10	10	11	1	120	22	311
11	1	10	9	120	20	331
12	9	1	8	129	18	349
13	8	7	1	137	16	365
14	1	6	7	138	14	379
15	5	1	6	145	12	391
16	4	5	1	151	10	401
17	1	4	3	152	8	409

18	3	1	2		155	6	415
19	2	1	1		157	4	419
20	1	0	1		158	2	421
21	1	1	0		159	2	423
22	0	1	1		159	2	425
23	1	0	1		160	2	427

Formulation 'परावर्त्य'

Table 28

Table of ten folds of formulation 'परावर्त्य'

W = Word, S = Syllable, L = Letters, T = TCV value, TT = transcendence through dimensional frames (vowels) FF = pronouncing frequency F = Formulation, H = Sathapatya, R = transcendental range SR = Synthesis of transcendental ranges

SN	1	2	3	4	5	6	7	8	9	10
Fold	W	S	L	T	TT	FF	F	H	R	SR
Value	1	4	10	27	57	247	115	88	235	497
Total	1	5	15	42	99	346	461	549	784	1281

Table29

Cyclic phased values of syllables of formulation 'परावर्त्य'

SN = Row of syllables,
SN Column of cyclic phased values
Cg = Cyclic phase value
Gt = Grant total

SN	1	2	3	4		Cg	Gt
1	6	5	8	8		27	27
2	1	3	0	2		6	33
3	2	3	2	1		8	41
4	1	1	1	1		4	45
5	0	0	0	0		0	45

Total cycle phases of formulation are '5'.

Formulation 'सप्तकं'

Table 30
Table of ten folds of formulation 'सप्तकं'

SN	1	2	3	4	5	6	7	8	9	10
Fold	W	S	L	T	TT	FF	F	H	R	SR
Value	1	3	8	25	48	55	78	84	205	435
Total	1	4	12	37	85	140	218	302	507	942

Table 31
Cyclic phased values of syllables of formulation 'सप्तकं'

SN = Row of syllables,
SN Column of cyclic phased values
Cg = Cyclic phase value
Gt = Grant total

SN	1	2	3		Cg	Gt
1	4	10	11		25	25
2	6	1	7		14	39
3	5	6	1		12	51
4	1	5	4		10	61
5	4	1	3		8	69
6	3	2	1		6	75
7	1	1	2		4	79
8	0	1	1		2	81
9	1	0	1		2	83
10	1	1	0		2	85
11	0	1	1		2	87

Total cycle phases of formulation are '8 + 3 = 11'.
Grand total of all cyclic phased value 81 + 6 = 87

Formulation 'योजयेत्'

Table 32
Table of ten folds of formulation 'योजयेत्'

W = Word, S = Syllable, L = Letters, T = TCV value, TT = transcendence
through dimensional frames (vowels) FF = pronouncing frequency F = Formulation,
H = Sathapatya, R = transcendental range SR = Synthesis of transcendental ranges

SN	1	2	3	4	5	6	7	8	9	10
Fold	W	S	L	T	TT	FF	F	H	R	SR
Value	1	3	7	25	165	165	72	82	195	415
Total	1	4	11	36	201	366	438	520	715	1130

Table 33

Cyclic phased values of syllables of formulation 'योजयेत्'

SN = Row of syllables,
SN Column of cyclic phased values
Cg = Cyclic phase value
Gt = Grant total

SN	1	2	3	Cg	Gt
1	8	5	12	25	25
2	3	7	4	14	39
3	4	3	1	8	47
4	1	2	3	6	53
5	1	1	2	4	57
6	0	1	1	2	59
7	1	0	1	2	61
8	1	1	0	2	63
9	0	1	1	2	65
10	1	0	1	2	67

Total cycle phases of formulation are '7 + 3 = 10'.

Grand total of all cyclic phased value 61 + 6 = 67

Formulation 'गुण्यात्'

Table 34

Table of ten folds of formulation 'गुण्यात्'

W = Word, S = Syllable, L = Letters, T = TCV value, TT = transcendence through dimensional frames (vowels) FF = pronouncing frequency F = Formulation, H = Sathapatya, R = transcendental range SR = Synthesis of transcendental ranges

SN	1	2	3	4	5	6	7	8	9	10
Fold	W	S	L	T	TT	FF	F	H	R	SR
Value	1	2	6	20	-9	140	66	68	160	340
Total	1	3	9	29	20	160	226	294	454	794

Table 35

Cyclic phased values of syllables of formulation 'गुण्यात्'

SN = Row of syllables,
SN Column of cyclic phased values
Cg = Cyclic phase value
Gt = Grant total

SN	1	2		Cg	Gt
1	6	14		20	20
2	8	8		16	36
3	0	0		0	36

Total cycle phases of formulation are '2 + 1 = 3'.
Grand total of all cyclic phased value 36 + 0 = 36

VIII

Conclusion

Integrated format of ascending (alome kram आलोम क्रम) & descending order (vilome kram विलोम क्रम) format of Devnagri alphabet being tabulated hereunder as per the TCV values of letters of alphabet

vowels

1, 2, 3, 4, 5, 6, 7, 8, 9, 9, 8, 7, 6, 5, 4, 3, 2, 1

Consonants

1, 2, 3, 4, 5, 5, 4, 3, 2, 1
2, 3, 4, 5, 6, 6, 5, 4, 3, 2,
3, 4, 5, 6, 7, 7, 6, 5, 4, 3
4, 5, 6, 7, 8, 8, 7, 6, 5, 4
5, 6, 7, 8, 9, 9, 8, 7, 6, 5
1, 3, 5, 7, 7, 5, 3, 1
2, 3, 6, 9, 9, 6, 3, 2

Yama letters

9, 10, 11, 12, 13, 14, 15, 16, 16, 15, 14, 13, 12, 11, 10, 9

The Ganita Sutras applied values being availed for organization of Ancient Wisdom as 18 Puranas (Braham Puran) to (Brahmand Puran) has

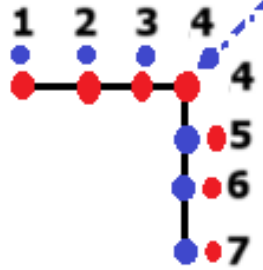
- (i) extension of Devnagri alphabet in integrated alome and vilom format, as depicted above.
- (ii) Extension of ten place value system into five place value system to 20 place value system.

The Sathapatya (geometric format) of syllable of organization of placement in integrated format of Ganita Sutra 4 and Ganita Upsutra 4 is

Ganita Sutra 4 and Ganita Upsutra 4

Text of Ganita Sutra 4

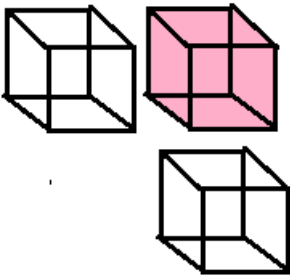
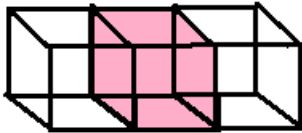
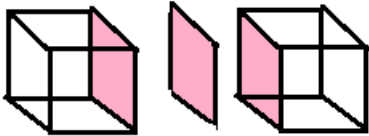
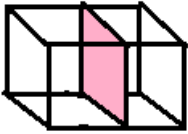
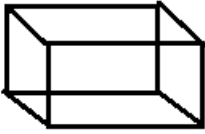
परावर्त्य योजयेत्
 syllables 4, syllables 3,
 total syllables $4 + 3 = 7$

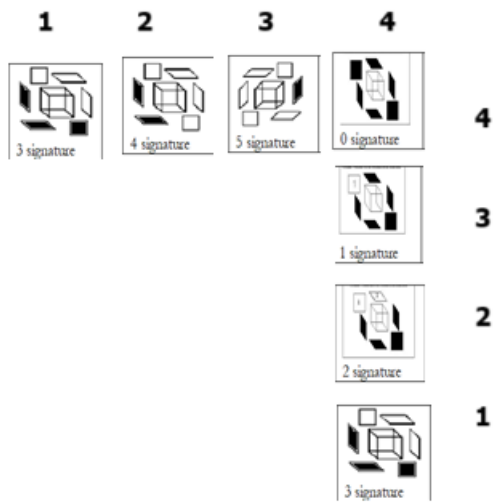


Text Ganita Upsutra 4

केवलैः सप्तकं गुण्यात् ।
 syllables 3, syllables 3, syllables 2,

total syllables $3 + 3 + 2 = 8$; $3 + 2 + 3$





Dr. Sant Kumar Kapoor,
15-12-2024