Phase 12
Vedas and Vedic Ganita Sutras & Upsutras

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12.7

समुच्चय, समुच्चये, समुच्चयः

(Samuchaya : Seventh and First inflextional terminations)

Samuchaya : All / Complete set of features Sathapatya combination

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1. Formulation ''समुच्चय *Samuchaya :*'

2. Comparative table of Ganita Sutras and Geeta chapters

3. Tables of structural data and of cyclic phases of 'समुच्चय, समुच्चये, समुच्चयः'

4. TCV values triple '23, 28, 36'

5. Srimad Bhagwad Geeta

6. Values pair (8, 9)

7. Enlistment of formulations of TCV values 8 and 9

8. Scripture of applied values of Vedic Mathematics

9. Axioms and Postulates of Vedic Mathematics and present day mathematics

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1
Formulation ''समुच्चय *Samuchaya :*''

1. Ganita Sutras and Upsutras text is availing formulation 'समुच्चय *Samuchaya : Seventh (*समुच्चये*) and First (*समुच्चयः*) inflextional terminations'*
2. The ''समुच्चय *Samuchaya :*' word is its seventh and first inflextions is component of Ganita Sutras 5, 15 & 16 and in Upsutras 10 and 13 as per the following table .

Ganita Sutras 5, 15 & 16	Ganita Upsutras 10, 13
5　　शून्यं साम्य**समुच्चये**	10　　**समुच्चय**गुणितः ।
15　　गुणित**समुच्चयः**	13　　गुणित**समुच्चयः समुच्चय**गुणितः ।
16　　गुणक**समुच्चयः** ।	

Mimansadarshan

Mimansadarshan is frequently availing format features and Sathapatya in its distinct inflextional terminations and particularly in its chapter 12 pada 4, the formulation ''समुच्चय *Samuchaya :*' is marking its presence as indicated below :-

Chapter 12, Pada 4
Shaloka 1, 2, 6, 7, 11, 17

१. जपाश्चाकर्मयुक्ताः स्तुत्याशीरभिधानं च याजमानेसु समुच्चयः स्यादाशीः= पृथक्त्वात् द्व

२. समुच्चयं च दशयति ।

६..समुच्चंयो वा प्रयोगेद्रव्यसमवायात् ।

७. समुच्चयं च दर्शयति ।

११. द्रव्यत्वेऽपि समुच्चयो द्रव्यकर्म निष्पत्तेः प्रतिपशु कर्मभेदादेवं सति

१७. उखायां काम्यनित्यसमुच्चयो नियोगे कामदर्शनात् ।

Simple rendering of Sammuchya

समुच्चय	**Sammuchya**	**Set**	**Aggregate**
विन्यस्त,	**Vinayasth**	**Configured**	
समूहन,	**Samuhan**	**Grouping**	
संयोग,	**Sanyog**		**Conincidence**
मिश्रण,	**Mishran**	**Mixure**	
मेल,	**Mail**	**Mail**	
सम्मिलन,	**Sammaelan**	**Insertion**	
संगठनमेल,	**Sanghtanmail**	**Organization mail**	
जोड,	**Jood**	**Joint**	
समुच्चयबोधक,	**Sammuchyabodhak**	**Conjunction**	
संगम	**Sangam**	**Confluence**	

2
Comparative table of Ganita Sutras and Geeta chapters

Note Geeta Chapters 8 and 9 are Avakata (अव्यक्त) format, These format features of Geeta Chapters 8 and 9 are to be approached for comprehension and imbibing for conditions free state of intelligence and for Grace of Braham by Faith and Conviction (Sharnagati शरणागति / consciously complete surrender of intelligence to Lord and Lord's ways). Chariot (Rath रथ) and charioteer (Sarthi सारथी) take only uptill Door steps (Dwar द्वार of building (Bhuwan) within which is located Braham (ब्रह्म) Dhaam (धाम), within which the entry is with grace of lord. It is blissful phase and stage of Transcendence from the Reach of attainments of Vedas.

C1 = Sutras 1 to 16, C2 = Geeta Chapters

C1	C2
1	10
2	11
3	12
4	13
5	14
6	15
7	16
8	17
9	18

C1	C2
10	1
11	2
12	3
13	4
14	5
15	6
16	7

Table 1

Comparative table of Ganita Sutras, Upsutras and Geeta chapters

To read together
S = Sutra, Us = Upsutra, Ch = Chapter

C1= Sutras, C2 = Upsutras, C3 = Geeta Chapters

C1	C2	C3	C1	C2	C3
1	1	10	8		
2	2	11	9	8	
3	3	12	10	9	1
4	4	13	11	10	2
5	5	14	12	11	3
6	6	15	13	12	4
7	7	16	14	13	5
			15		6
C1	C2	C3	16		7

1. S1, Us1, Ch10 to be read together
2. S2, Us2, Ch11 to be read together
3. S3, Us3, Ch12 to be read together
4. S4, Us4, Ch13 to be read together
5. S5, Us5, Ch14 to be read together
6. S6, Us6, Ch15 to be read together
7. S7, Us7 Ch16 to be read together
8. S8 is to be read alone.
9. S9, Us8 to be read together
10. S10, Us9 & Ch1 to be read together.
11. S11, Us10, Ch 2 to be read together.
12. S12, Us11, Ch 3 to be read together.
13. S13, Us12, Ch 4 to be read together.
14. S14, Us13, Ch 5 to be read together.
15. S15, Ch 6 to be read together.
16. S16, Ch 7 to be read together.

3
Tables of structural data and of cyclic phases of
'समुच्चय, समुच्चये, समुच्चयः'
TABLE 1

Table of Cyclic phases of syllables of formulation 'समुच्चय'

	syllables	स	मु	च्च	य		
	TCV	4	12	5	2		

SN Cyclic phase					TCV	Total TCV
1	4	12	5	2	23	23
2	8	7	3	2	20	43
3	1	4	1	6	12	55
4	3	3	5	5	16	71
5	0	2	0	2	4	75
6	2	2	2	2	8	83
7	0	0	0	0	0	83

Note :-

At 7th cyclic phase zero value is attained.

TABLE 2

Table of Cyclic phases of syllables of formulation 'समुच्चये'

syllables	स	मु	च्व	ये
TCV	4	12	5	7

SN	Cyclic phase					TCV	Total TCV
1	4	4	12	5	7	28	28
2	8	8	7	2	3	20	48
3	1	1	5	1	5	12	60
4	4	4	4	4	4	16	76
5	0	0	0	0	0	0	76

Note :-

At 5th cyclic phase zero value is attained.

TABLE 3

Table of Cyclic phases of syllables of formulation 'समुच्चयः'

syllables	स	मु	च्व	यः
TCV	4	12	5	15

SN Cyclic phase					TCV	Total TCV
1	4	12	5	15	20	20
2	8	7	10	11	36	56
3	1	3	1	3	8	64
4	2	2	2	2	8	72
5	0	0	0	0	0	72

Note :-

At 5th cyclic phase zero value is attained.

TABLE 4

Ganita Sutra 5

शून्यं साम्यसमुच्चये

Structural data of Ganita Sutra 5

	Sutra	Words	Syllables	Letters	TCV
GS 5	शून्यं साम्यसमुच्चये	2	8	20	71

Table of Cyclic phases of syllables of formulation 'साम्य समुच्चये'

syllables	सा	म्य	स	मु	च्च	ये
TCV	5	11	4	12	5	7

SN			Cyclic phase				TCV	Total TCV
1	5	11	4	12	5	7	28	28
2	6	7	8	7	2	2	32	60
3	1	1	1	5	0	4	12	72
4	0	0	4	5	4	3	16	88
5	0	4	1	1	1	3	10	98
6	4	3	0	0	2	3	12	110
7	1	3	0	2	1	1	8	118
8	2	3	2	1	0	0	8	126
9	1	1	1	1	0	2	6	132
10	0	0	0	1	2	2	5	137
11	0	0	1	1	0	2	4	141
12	0	1	0	1	2	2	6	147

13	1	1	1	1	0	2	**6**	**153**
14	0	0	0	1	2	1	**4**	**157**
15	0	0	1	1	1	1	**4**	**161**
16	0	1	0	0	0	1	**2**	**163**
17	1	1	0	0	1	1	**4**	**167**
18	0	1	0	1	0	0	**2**	**169**
19	1	1	1	1	0	0	4	173
20	0	0	0	1	0	1	2	175
21	0	0	1	1	1	1	4	179
22	0	1	0	0	0	1	2	181
23	1	1	0	0	1	1	4	185
24	0	1	0	1	0	0	2	187
25	1	1	1	1	0	0	4	191

Note :-

Base phases 19,   Summation value 173

Frequency phase 6, Summation value 22

TABLE 5

Ganita Sutra 15

गुणितसमुच्चयः

Structural data of Ganita Sutra 15

	Sutra	Words	Syllables	Letters	TCV
GS 15	गुणितसमुच्चयः	1	7	16	56

Cyclic phases of syllables of formulation '**गुणित समुच्चयः**'

syllables	गु	णि	त	स	मु	च्च	यः
TCV	6	9	5	4	12	5	15

Sn	Cyclic phase							TCV	Total TCV
1	6	9	5	4	12	5	15	41	41
2	3	4	1	8	7	10	9	42	83
3	1	3	7	1	3	1	6	22	105
4	2	4	6	2	2	5	5	26	131
5	2	2	4	0	3	0	3	14	145
6	0	2	4	3	3	3	1	16	161
7	2	2	1	0	0	2	1	8	169
8	0	1	1	0	2	1	1	6	175
9	1	0	1	2	1	0	1	6	181
10	1	1	1	1	1	1	1	7	188
11	0	0	0	0	0	0	0	0	188

Note :-

At 11th cyclic phase zero value is attained.

TABLE 6
Ganita Sutra 16
गुणकसमुच्चयः
Structural data of Ganita Sutra 16

	Sutra	Words	Syllables	Letters	TCV
GS 16	गुणकसमुच्चयः ।	1	7	16	52

Cyclic phases of syllables of formulation 'गुणक समुच्चयः'

syllables   गु ण क   स मु च्च यः

TCV   6   8   2   4   12   5   15

Sn	Cyclic phase							TCV	Total TCV
1	6	8	2	4	12	5	15	38	38
2	2	6	2	8	7	10	9	44	82
3	4	4	6	1	3	1	7	26	108
4	0	2	5	2	2	6	3	20	128
5	2	3	3	0	4	3	3	18	146
6	1	0	3	4	1	0	1	10	156
7	1	3	1	3	1	1	0	10	166
8	2	2	2	2	0	1	1	10	176
9	0	0	0	2	1	0	1	4	180
10	0	0	2	1	1	1	1	6	186
11	0	2	1	0	0	0	1	4	190
12	2	1	1	0	0	1	1	6	196
13	1	0	1	0	1	0	1	4	200
14	1	1	1	1	1	1	0	6	206
15	0	0	0	0	0	1	0	1	207
16	0	0	0	0	1	1	0	2	209

17	0	0	0	1	0	1	0	2	211
18	0	0	1	1	1	1	0	4	215
19	0	1	0	0	0	1	0	2	217
20	1	1	0	0	1	1	0	4	221
21	0	1	0	1	0	1	1	4	225
22	1	1	1	1	1	0	1	6	231
23	0	0	0	0	1	1	0	2	233

Note :-

Total phases 23, summation value 233.

Base phases 16,   Summation value 209

Frequency phase 7, Summation value 24

TABLE 7

Ganita Upsutra 10

समुच्चयगुणितः।

Structural data of Ganita Upsutra 10

	Sutra	Words	Syllables	Letters	TCV
GU 10	समुच्चयगुणितः।	1	7	16	56

Cyclic phases of syllables of formulation 'समुच्चय गुणितः

syllables	स	मु	च्च	य	गु	णि	तः
TCV	4	12	5	2	6	9	18

SN	Cyclic phases							TCV	Total TCV
1	4	12	5	2	6	9	18	40	40
2	8	7	3	4	3	9	14	48	88
3	1	4	1	1	6	5	6	24	112
4	3	3	0	5	1	1	5	18	130
5	0	3	5	4	0	4	2	18	148
6	3	2	1	4	4	2	2	18	166
7	1	1	3	0	2	0	1	8	174
8	0	2	3	2	2	1	0	10	184
9	2	1	1	0	1	1	0	6	190
10	1	0	1	1	0	1	2	6	196
11	1	1	0	1	1	1	1	6	202
12	0	1	1	0	0	0	0	2	204
13	1	0	1	0	0	0	0	2	206
14	1	1	1	0	0	0	1	4	210
15	0	0	1	0	0	1	0	2	212
16	0	1	1	0	1	1	0	4	216
17	1	0	1	1	0	1	0	4	220
18	1	1	0	1	1	1	1	6	226
19	0	1	1	0	0	0	1	3	229
20	1	0	1	0	0	1	1	4	233
21	1	1	1	0	1	0	0	4	237

22	0	0	1	1	1	0	1	4	241
23	0	1	0	0	1	1	1	4	245
24	1	1	0	1	0	0	1	4	249
25	0	1	1	1	0	1	0	4	253
26	1	0	0	1	1	1	0	4	257
27	1	0	1	0	0	1	1	4	261
28	1	1	1	0	1	0	0	4	265

Note :-

Total phases 28, summation value 265.

Base phases 21,   Summation value 237

Frequency phase 7, Summation value 28

TABLE 8

Ganita Uputra 13

गुणितसमुच्चयः समुच्चयगुणितः।

Structural data of Ganita Upsutra 13

	Sutra	Words	Syllables	Letters	TCV
GU 13	गुणितसमुच्चयः समुच्चयगुणितः।	2	14	32	112

Cyclic phases of syllables of formulation

'गुणितसमुच्चयः

Cyclic phases of syllables of formulation 'गुणित समुच्चयः'

syllables	गु	णि	त		स	मु	च्च	यः
TCV	6	9	5		4	12	5	15

Sn	Cyclic phase							TCV	Total TCV
1	6	9	5	4	12	5	15	41	41
2	3	4	1	8	7	10	9	42	83
3	1	3	7	1	3	1	6	22	105
4	2	4	6	2	2	5	5	26	131
5	2	2	4	0	3	0	3	14	145
6	0	2	4	3	3	3	1	16	161
7	2	2	1	0	0	2	1	8	169
8	0	1	1	0	2	1	1	6	175
9	1	0	1	2	1	0	1	6	181
10	1	1	1	1	1	1	1	7	188
11	0	0	0	0	0	0	0	0	188

Note :-

At 11th cyclic phase zero value is attained.

समुच्चयगुणितः।

Cyclic phases of syllables of formulation 'समुच्चय गुणितः

syllables	स	मु	च्व	य	गु	णि	तः
TCV	4	12	5	2	6	9	18

SN	Cyclic phases							TCV	Total TCV
1	4	12	5	2	6	9	18	40	40
2	8	7	3	4	3	9	14	48	88

3	1	4	1	1	6	5	6	24	112
4	3	3	0	5	1	1	5	18	130
5	0	3	5	4	0	4	2	18	148
6	3	2	1	4	4	2	2	18	166
7	1	1	3	0	2	0	1	8	174
8	0	2	3	2	2	1	0	10	184
9	2	1	1	0	1	1	0	6	190
10	1	0	1	1	0	1	2	6	196
11	1	1	0	1	1	1	1	6	202
12	0	1	1	0	0	0	0	2	204
13	1	0	1	0	0	0	0	2	206
14	1	1	1	0	0	0	1	4	210
15	0	0	1	0	0	1	0	2	212
16	0	1	1	0	1	1	0	4	216
17	1	0	1	1	0	1	0	4	220
18	1	1	0	1	1	1	1	6	226
19	0	1	1	0	0	0	1	3	229
20	1	0	1	0	0	1	1	4	233
21	1	1	1	0	1	0	0	4	237
22	0	0	1	1	1	0	1	4	241
23	0	1	0	0	1	1	1	4	245
24	1	1	0	1	0	0	1	4	249
25	0	1	1	1	0	1	0	4	253

26	1	0	0	1	1	1	0	4	257
27	1	0	1	0	0	1	1	4	261
28	1	1	1	0	1	0	0	4	265

Note :-

Total phases 28, summation value 265.

Base phases 21,   Summation value 237

Frequency phase 7, Summation value 28

4
TCV values triple '23, 28, 36'

1. TCV (समुच्चय) = 23 parallel with summation value of four folds of h6,
2. TCV (समुच्चये) = 28 is parallel with summation value of four folds of D9 and TCV (समुच्चयः) = 36 is parallel with summation value of four folds of D11.

Some of the prime formulations of TCV value 23 are :

(1) TCV (जन्म / Birth).
(2) TCV (संस्कार / characteristic potentiality index at Birth)
(3) TCV (सहस्त्र / Value one thousand / values range of potential format for organization of Vedic knowledge;) there are 168 primes uptill 1000 and value 168 is of organization 8 (21) = 8 x (1+2+3+4+5+6) of Sathapatya format of 8 axes dimensional frame of 8 space / Asht Prakrati / 8 fold nature
(4) Value 23 is of organization feature (3 +5) + (3 x 5); set up of solid dimensional order transcendental (5-space)
(5) The cyclic phases of syllables of formulation Surya (Sun) are
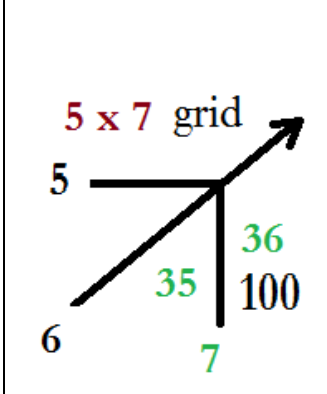
	सूर्य		
Syllables	सू र्य		
TCV	9 4		

	Cyclic phases		
Phase 1	9 4	13	13
Phase 2	5 5	10	23
Phase 3	0 0	0	23
Total phase 3	summation value of 3 phase = 23		

Some of the prime formulations of TCV value 28 are :

(1) TCV (ब्रह्म / Braham) = 28
(2) '6' is first perfect number.
(3) '28' is second perfect number.
(4) 6 + 28 = 34 is parallel with summation value of folds of H9, representative regular body of 9-space in 4-space.
(5) Value 28 is parallel with summation value of four fold spectra of D9 = (9, 7, 7, 5).

Some of the prime formulations of TCV value 36 are :

(1) TCV (प्रणवः / Pranava) = 36 = TCV (अनुबन्ध)
(2) Value 36 is of organization $36 = 6^2$.
(3) 6^2 is value in 10 place value system, first triple digit number of 6 place value system

Six Place Value
Double digit numbers

01	02	03	04	05	
10	11	12	13	14	
15	20	21	22	23	
24	25	30	31	32	
33	34	35	40	41	
42	43	44	45	50	
51	52	53	54	55	100

5 x 7 grid
5
36
35   100
6
7

(4) It will be a blissful exercise to enlist different formulations of TCV values 23, 28 and 36.

5
Srimad Bhagwad Geeta

1. Srimad Bhagwad Geeta is of Essence of values and Sathapatya of Vedantatri (वेदान्तत्रयी / Upnishads, Braham Sutra and Srimad Bhagwad Geeta

2. The very first shaloka, shaloka 1 of chapter 1 of Geeta is a composition of eight formulations, of TCV values of summation value (286). The transition gaps of shalokas of consecutive chapters 1 to 18, together are of summation value 284, one more than 283. And further the pair of values (286, 284) is of the format of (284 as dimension and 286 as domain)

3. It is on 10th day of Mahabharta war, that Dhitrastra with intensified urge to know from Sanjay, about the state of affairs of war uptill then and srimad Bhagwad Geeta is the fully explained version of narration by Sanjay to Dhitrastra.

4. So unfolding being the feature of Text of Srimad Bhagwad Geeta bring to focus as that Ganita Sutra 1 and Ganita Upsutra 1 are to be read along with chapter 10 of Srimad Bhagwad Geeta.

6
Values pair (8, 9)

1. The values pair (8,9) is of summation value 8 + 9 = 17.
2. Value 17 is parallel with summation value of four folds of h4 ½
3. Further value 17 is parallel with
(i)   TCV (स꘭जय Sanjay)
(ii)   TCV (आत्मा Atma / Soul)
(iii)   TCV (दिव्य Divya / Divine / Transcendental)
(iv)   TCV (द्रव्य Dravya / content)

4. It will be blissful to enlarge this enlistment of formulation of TCV value 17.
5. Value 8 is of organization $8 = 2^3$ and is of Sathapatya $8 = D4$
6. Value 9 is of organization $9 = 3^2$ and is of Sathapatya $9 = h\ 2\ ½$
7. Values pair (8, 9) are of organization pair $(2^3, 3^2)$ which is unique vertical reflection pair.
8. The values pair (8, 9) is also of Sathapatya parallel with 8 space and 9 space respectively.

7
Enlistment of formulations of TCV values 8 and 9

1. TCV (आकाश / Space) = 8.
2. TCV (आप / Aapa / water) = 8
3. TCV (एक / ek) = 8
4. With spatial dimensional frame, 3-space body (cube) leads to a set up of 8 sub cubes
5. It will be a blissful exercise to extend enlistment of formulation of TCV value 8
6. TCV (काल / Time) = 9
7. There are 9 geometries of 4-space of representative regular bodies being 9 versions of Hyper cube 4.
8. Transcendence of transcendental space (5-space) from domain to dimension to dimension of dimension is values triple (5, 3, 1) of summation value $5 + 3 + 1 = 9$
9. There are 9 vowels / स्वर Swara
10. TCV (स्वर) = 15 is parallel with 5 x 3 x 1.
11. Further it is parallel with TCV (प॰च / Panch / five) = 15
12. Still further value 15 is parallel with 15 eyes of five heads of Lord Shiv (Transcendental Lord) with each Head being equipped with triple eyes.
13. There is limit of Charamchakshu / physical eye while with meditation and ride of chariot being driven by Ek Akshar Om. One is blissed with grace of transcendental lord, as a result of which

physical eyes transits and transforms into दिव्य चक्षु Divya Chakshu and ज्ञान चक्षु Gyan Chakshu

14. TCV (चक्षु) = 13
15. TCV (ज्ञान चक्षु) = 34
16. The obersvation potentiality of Viloknam (विलोकनम्), TCV (विलोकनम) = 41 is of range of Gyan Chakshu (34, 35, 36, 37, 38, 39, 40, 41).
17. It is this eight fold range of quadruple folds each of value 41 + 34 = 75 = 40 + 35 = 39 + 36 = 38 + 37 is it work and unfolds Ganita Upsutras, which further unfold Ganita Sutras and together unfold parallel with the knowledge and enlightenment of Srimad Bhagwad Geeta

8
Scripture of applied values of Vedic Mathematics

1. Charak Samhita, Ayurved scripture of Ayurved upved of Rigved.
2. Shapat brahman, scripture of upved of Yajurved.
3. Phonomenon of Paramvihom (transcendental space) lively within Richas as manifestation of Udgith as features and Sathapatya of Upved of Samved having reached us namely.
4. Mansara, scripture of Sathapatya Upved of Athara
5. will satisfied the urge of sadkhas on pursuit for being parallel with the location presence of text of Ganita Sutras.

9
Axioms and Postulates of Vedic Mathematics
and present day mathematics

1. The core difference of Vedic axioms and postulates in reference to present day mathematics is that Vedic Mathematics accepts phase wise reach of (intelligence Budhi) parallel with its Uaddhi (Conditions) while present day mathematics, practically accepts no such limitation for the logic.
2. Modern mathematics chases linearly along the format of 'line' while vedic Mathematics initially accepts line in its extended format as infinite line (being a circumference of a circle).

3. Vedic Mathematics then splits circle into a pair of half circles, and works with half circle and dispenses full circle.

4. The half circle itself is accepted as being transiting and transforming into a Dhanush and then even dhanush, as well is thrown out as being of no help.

5. Beyond that it is the sole syllable Om as Sarthi comes to and help but only uptill the Dwar (door), TCV value 19 of Bhuwan (building) in which is located Brahamdhaam.

6. The entry into the bhawan itself is a matter of grace for conditionsless intelligence (upadhirahit budhi).

7. And beyond that it is only Sharanagati, intelligence fully surrendering with complete faith and conviction to creator the Supreme and it is this phase and stage where logic and reach transit and transform as being of self referral state, which is being not acceptable to the present day logicians and mathematicians.

8. The follow up write ups are the chase steps as to how the trigonometry and mathematical tools of the present day mathematics are of no help.

9. The Vedic mathematics have transcended these phase and the vedic mathematics reach with conditionless budhi is the Brahman domain.

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