Vedic Mathematics
Teachers Course

Lesson 02
Integrated format of Ganita Sutras and Upsutras text

1. Ganita Sutras text is complemented and supplemented by Ganita Upsutras text. Ganita Upsutras bridge the gaps of consecutive Sutras.
2. The integrated format of Ganita Sutras and Upsutras is of following organization:-

S N	Placement of Sutra / Upsutra		S N	Placement of Sutra / Upsutra
1	Sutra-1		16	Sutra-9
2	Upsutra-1		17	Upsutra-8
3	Sutra-2		18	Sutra-10
4	Upsutra-2		19	Upsutra-9
5	Sutra-3		20	Sutra-11
6	Upsutra-3		21	Upsutra-10
7	Sutra-4		22	Sutra-12
8	Upsutra-4		23	Upsutra-11
9	Sutra-5		24	Sutra-13
10	Upsutra-5		25	Upsutra-12
11	Sutra-6		26	Sutra-14
12	Upsutra-6		27	Upsutra-13
13	Sutra-7		28	Sutra-15
14	Upsutra-7		29	Sutra-16
15	Sutra-8			

Note 1 :- Sutras 8 and 9, both texts are of 16 letters each.

Likewise Sutras 15 and 16 texts, both as well are of 16 letters each. Value 16 = 2^4 is parallel with the spatial dimensional frame of quadruple spatial dimensions of 4-space. Further as 2 + 2 = 2 x 2 = (-2) x (-2) and $2^4 = 4^2$, as such the gap between Sutra 8 and 9, as well as the gap between Sutra 15 and 16 have self bridging organization feature.

Note 2:- Further as that 8 = 2^3 and 9 = 3^2 make vertical reflection pairing of (8, 9), because of which values range 1 to 16 accepts partition at the middle as Sutras 1 to 8 and Sutras 9 to 16.

Note 3:- Numbers 1 to 16 yield 29 factors

Numbers	Factors	Number of factors	Total number of factors
1	1	1	1
2	2	1	2
3	3	1	3
4	2 x 2	2	5
5	5	1	6
6	2 x 3	2	8
7	7	1	9
8	2 x 2 x 2	3	12
9	3 x 3	2	14
10	2 x 5	2	16
11	11	1	17
12	2 x 2 x 3	3	20
13	13	1	21

14	2 x 7	2	23
15	3 x 5	2	25
16	2 x 2 x 2 x 2	4	29

Note 4:- The transition from the mathematical domain of a given Sutra to the next Sutra is facilitated by the in between gap bridging Upsutra of integrated format.

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