

ORGANIZATION FORMAT OF GANITA SUTRAS

Step – 19: Five fold transition from Ganita Sutra-2

1. Five fold transition from Ganita Sutra-2 deserves to be chased.
2. These transition steps are
 - i. Transition from Ganita Sutra-2 to Ganita Sutra-1
 - ii. Transition from Ganita Sutra-2 to Ganita Upsutra-1
 - iii. Transition from Ganita Sutra-2 to Ganita Upsutra-2
 - iv. Transition from Ganita Sutra-2 to Ganita Sutra-3
 - v. Transition from Ganita Sutra-2 to Ganita Upsutra-3
3. It would be a blissful exercise to sequentially permit the transcending mind to chase simultaneously the working rules of
 - i. Ganita Sutra-2 and Ganita Sutra-1
 - ii. Ganita Sutra-2 and Ganita Upsutra-1
 - iii. Ganita Sutra-2 and Ganita Upsutra-2
 - iv. Ganita Sutra-2 and Ganita Sutra-3
 - v. Ganita Sutra-2 and Ganita Upsutra-3
4. The working rules (of arithmetic domain) of Ganita Sutras 2, 1, Ganita Uputras 1, 2 and of Ganita Sutra-3 and Ganita Upsutra-3 are as under

Sr.	Sutra / Upsutra number	Text	Working rule in arithmetic domain
1	Ganita Sutra-2	निखिलं नवतश्चरमं दशतः। (<i>Nikhilam Navataschramam Dasatah</i>)	All from 9 and the last from ten
2	Ganita Sutra-1	एकाधिकेन पूर्वेण। (<i>Ekadhiken Purvena.</i>)	By One More than One before
3	Ganita Upsutra-1	आनुरूप्येण। (<i>Anurupyena</i>)	Proportionately

4	Ganita Upsutra-2	शिष्यते शेषसंज्ञः । (<i>Sisyate Sesasamjnah</i>)	That remains is remainder
5	Ganita Sutra-3	ऊर्ध्वतिर्यग्भ्याम् । (<i>Urdhvatiryagbhyam</i>)	Vertically and crosswise
6	Ganita Upsutra-3	आद्यमाद्येनान्त्यमन्त्येन । (<i>Adyamadyenantyamant yen</i>)	First with first Last with last

Transition from Ganita Sutra-2 to Ganita Sutra-1

5. The transition from Ganita Sutra-2 to Ganita Sutra-1 shall be a transition from the organization in a place value system to linear sequential setting as one more than before.
6. This transition, may on the face of it look like simple but in fact it is going to be of very big range of features. It has large number of mathematical knots.
7. These mathematical knots are there as the format beneath Ganita Sutra-2 organization of double and higher digits expressions for the numbers while in case of Ganita Sutra-1 there is an organization of single digit expression for every number despite difference in their sequential values.
8. The organization format beneath Ganita Sutra-2 text is of spatial order features while in case of Ganita Sutra-1, it is of linear order features.
9. One may have a halt here and take note as that the sequential values (1, 2, 3), are of conical format, while the format of Ganita Sutra-2 is of conical format but with the feature of sequential linear order at the index.
10. The augmentation by way of transition from the organization format of the text of Ganita Sutra-2 to the text of Ganita Sutra-1 is having additional feature of approaching (10 as 1 at the base) and thereby the sequential ordering emerges to be (10⁰, 10¹, 10², --) and the same deserves to be appreciated in the light of the linear sequential ordering (0, 1, 2, 3, --).
11. Here it may be relevant to note that NVF (Augmentation) = NVF (Two Space solid).

12. One may have a pause here and a fresh look at the dimensional synthesis mathematics value for synthesis of pair of linear dimensions which comes to be $1+1 -(-1) = 3$.
13. Further it also would be relevant to note that the dimensional synthesis value for pair of dimensions of (-1) space order shall be leading us to $(-1)+ (-1) - (-3) = 1$.
14. It would be blissful to comprehend and imbibe the organization feature as that dimensional synthesis value '1' as well is of a domain fold / 1-space playing the role of domain in the manifestation layer (-1, 0, 1, 2) / hyper cube '1'.

Transition From Ganita Sutra-2 to Ganita Upsutra-1

15. The augmentation by way of transition from the organization format of Ganita Sutra-2 in the light of the organization format of ganita Upsutra-1, firstly is of the features of there being a sequential set up of place value systems, all being of a symmetric format.
16. It shall be a blissful exercise to have a comprehension of the features of the sequence of whole range of place value systems.
17. Here it would be relevant to note that the working rule of arithmetic domain of Ganita Upsutra-1 has been given simple English rendering expression 'proportionately'. However the text formulation of Ganita Upsutra-1 'Anurupeyena' leads us to 'follow the form as it is'.
18. It is a symmetry rule which traces the form of the formation.
19. It that way is the rule of geometric format comparisons.
20. It is under this feature that the pair of interval / lines / one space set up / one space body are compared.
21. Here it also would be relevant to have a fresh look at our well known symbol of equality = a pair of equal lines in parallel setting.

22. This augmentation also shall be helping us have a transition for the expression of the number of linear sequencing order of Ganita Sutra-1 along the place value format of Ganita Sutra-2 in the form of polynomials.
23. Further it as such, shall be providing a transition for working out polynomials of zero value, which in our common parlance are designated as 'equations'.
24. As such, here is the seed for transition from arithmetic to algebra.

Transition from Ganita Sutra-2 to Ganita Upsutra-2

25. The Transition from Ganita Sutra-2 through the phases and stages of augmentation with the working rules of Ganita Sutra-1, Ganita Upsutra-1 and 2, in that sequence and order, shall be leading us to a transition from symmetry to asymmetry as the 'remainders' in the context of divisors come to be.
26. One shall sit comfortably and complete the circle of transition from Ganita Sutra-2 through Ganita Sutra-1, Ganita Upsutra-1 and 2, back to from Ganita Upsutra-2 to Ganita Sutra-2.
27. One may have a pause here and be face to face with the phenomenon of transition from asymmetric set ups to place value organization which in that way simultaneously assimilate symmetry as well as asymmetry and also the sequential order particularly the linear sequencing order at base as well as at index.

Transition from Ganita Sutra-2 Ganita Upsutra-3

28. The organization features of the format of Ganita Sutra-2 as are reflected as triple (7, 14, 7) would lead us to permissibility for a reach from either end to the middle which shall be of spatial format.
29. This transition from Ganita Sutra-2 to Ganita Upsutra-3, can be better appreciated by being through the phase and stage of transition firstly from

the format of Ganita Sutra-2 to Ganita Sutra-3 and then secondly from the format of Ganita Sutra-3 to the format of Ganita Upsutra-3.

30. Here it would be relevant to note that the triple (6, 4, 2) which is of a dimensional transcendence triple which takes from 6-space to 4-space and ahead from 4-space to 2-space and that a step further ahead would be from 2-space to 0-space and thereby there would be a quadruple of artifices (6, 4, 2, 0).
31. It is this fourth phase and stage which takes us from artifice -2 to artifice 0 and parallel to it from 2-space to 0-space, as such shall be taking us reach at the middle from either end being a reach to a point / 0-space / artifice 0 bringing to focus that as here that point is a point circle.
32. One may have a pause here and have a fresh look at the sequential ordering (0, 1, 2, 3, --) and x^0, x^1, x^2, \dots .
33. It as such shall be requiring focused attention as that 0-space as 0 value deserve to be properly comprehended while artifices and dimensional spaces are accepted as parallel set ups as is the axioms of Sankhya Nishtha and Yoga Nishtha whereby dimensional frames and artifices of numbers are accepted parallel to each other, as well as complementary and supplementary of each other.
34. Here it also would be relevant to note that while the linear equivalence for the all dimensional spaces comes to be (1, 1x 3, 1 x 3 x 5, 1 x 3 x 5 x 7, ---) while in case of even dimensional orders it comes to be (2, 2 x 4, 2 x 4 x 6, 2 x 4 x 6 x 8, ---).
35. Here it would be relevant to note that the linear dimensional equivalence values for odd dimensional spaces though appear to take account of 1-space as well but the fact that multiplication by 1 does not effect the multiplication value therefore $1 \times 3 = 3$, $1 \times 3 \times 5 = 3 \times 5$, $1 \times 3 \times 5 \times 7 = 3 \times 5 \times 7$ and so on shall be making parallel formulations for reaching at dimensional values for odd spaces as 3, 3 x 5, 3 x 5 x 7, --- and for even spaces as 2, 2 x 4, 2 x 4 x 6, ---.
36. And with it 3-space and 2-space become the principle dimensional spaces. Further as cube is the representative regular body of 3-space and square

being the representative regular body of 2-space, therefore cube and square, as such become the principle geometric bodies for having a chase of dimensional formats.

37. One may have a pause here and to permit the transcending mind to transcend through the values of NVF equation:

$$\text{NVF (Cube)} + \text{NVF (Square)} = \text{NVF (Mathematics)}$$

Transition cycle

38. The transition cycle from Ganita Sutra-2 to itself through the phases and stages of Ganita Sutra-1, Ganita Upsutra-1, Ganita Upsutra-2, Ganita Sutra-2, Ganita Sutra-3, Ganita Upsutra-3, back to Ganita Upsutra-2, and likewise other different coordination, deserve to be chased fully to comprehend and imbibe the values and features of the set up of the circumference of a circle and of surface of sphere and hyper spheres (in context of a point, circle and of point sphere and point hyper spheres), makes a multi features set up and it as such would bring us face to face with the richness of the organization format features of Ganita Sutras.

39. It would be a blissful exercise to chase 5 fold transition from Ganita Sutra-2 in reference to the letters and transcendental indices value of Ganita Sutra-2, Ganita Sutra-1, Ganita Upsutra-1, Ganita Upsutra-2, Ganita Upsutra-3 and Ganita Sutra-3.

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