VM Course

ORGANIZATION FORMAT OF GANITA SUTRAS

Step – 36: Transition from Hyper cubes to Hyper spheres

1. The domain boundary ratio of square and circle accepts common formulation $A^2 : 4B^1$.
2. Likewise the cube and sphere as well admit common formulation for ratio of their domains and boundary as $A^3 : 6B^2$.
3. This pair of formulations (i) $A^2 : 4B^1$ and (ii) $A^3 : 6B^2$ are the special cases of the general formulation $A^n: 2^N B^{n-1}$ for N=2, 3.
4. This formulation ($A^n: 2^N B^{n-1}$), holds for whole range of hyper cubes and hyper spheres for all values of n.
5. It would be a blissful exercise for chase transition from the set-up of hyper cube 4 to hyper sphere 4.
6. The transition from square & circle to Cube & Sphere would bring to focus that boundaries of circle and sphere are integrated / unified while the boundaries of square and cube are synthetic set ups of four lines (& four points) in case of square and of 6 surfaces (& twelve edges and a 8 points in case of cube.
7. Here it would be relevant to note that points and lines are zero areas and as such are zeros in 2-space while points lines and surfaces are of zero volumme and as such are zeros in reference to 3-space.
8. As such 1-space plays the role of boundary of 2-space while 2-space itself plays the role of boundary of 3-space.
9. Likewise 3-space plays the role of boundary of 4-space.
10. The boundary of 4-space is solid and is a synthetic set up of 8 solid components.
11. Here it also would be relevant to note that cube / 3-space permits cut as 8 sub cubes / 8 octants.

12. Further it also would be relevant to note that 4-space plays the role of origin of 3-space and as such center of cube is of the features of hyper cube 4.

13. One may have a pause here and have a fresh look at the set up of the circle to imbibe the integrated and unified set up of the circumference vis-à-vis the synthetic set up of four components of the linear boundary of square.

14. Further one shall have a fresh look at the unified set up of the surface of sphere vis-à-vis the synthetic set up of six spatial components of the boundary of a cube.

15. One may have a pause here and permit the transcending mind to be face to face with these features of transition from the set up of a square to that of a circle and further from the set up of a cube to that of a sphere.

16. It would bring to focus that the transition from square to circle and ahead from cube to sphere would mean to free the synthetic joints of the linear boundary of a square and of spatial boundary of cube to reach at unified boundary of circle as well as of a sphere.

17. With it, the transition from hyper cube 4 to hyper sphere 4 would mean to free the solid boundary of hyper cube 4 from its synthetic joints and to reach at unified solid boundary of hyper sphere – 4.

18. For it, first of all one shall have a fresh look at the set up of a cube itself being a synthetic set up of eight sub cubes parallel to the cut of 3-space into eight octants.

19. It also would bring to focus the fact that the cube accepts synthetic geometric envelope availing six surfaces, twelve edges and eight corner points.

20. Further the volumme of the cube would be accepting unifying structural frame consisting of 3 linear dimensions joint at the common origin at the seat of center of the cube.

21. One may have a pause here and chase the synthetic set up of the cube within geometric envelope and a dimensional frame.

22. The cube as eight sub cubes deserve to be chased.

23. Let us start with the first sub cubes. It shall be enveloped within six surface plates, twelve edges and eight corner points which may be tabulated as under:

Sub cube	Volumme	Surfaces	Edges	Corner points	Total components
First	1	6	12	8	27

24. Let us have second sub cube and synthesise it with the first cube along its one of the surface face. It as such shall be bringing corresponding surfaces / faces of the pair of sub cubes face to face with itself and the synthesise would make one of such surface / face to be redundant and thereby four corner points, four edges and one surface would become redundant and the set up of such synthesise set up of pair of sub cubes would be of following components.

Contribution by sub cube	Vol.	Surf.	Edges	Corner points	Total comp.	Grand total
First	1	6	12	8	27	27
Second	1	5	8	4	18	45

25. One may have a pause here and have a fresh look at the set up of eight sub cubes synthesizing a cube. It would bring to focus that there would be a pair of sub cubes along first axis.

26. Likewise there would be a pair of sub cubes along second axis. And that way there would be four sub cubes availing the pair of axes.

27. It would be blissful to comprehend that this set up of pair of axis is infact simultaneously availing half of the third axis as well.

28. As such, so far emerging set up of four sub cubes (taken as first set of four sub cubes) availing pair of axes and half of third axis shall be structuring a square base of four quarters, which may be taken being the upper face of the base utilized by first set of four sub cube for their synthesis availing first half of the third axis.

29. It shall be simultaneously leading to the availability of the lower face of the base which may be there for synthetic set up for other four sub cubes with the first set up of four sub cubes.

30. It would be relevant to note that the contribution of synthetic envelope components by second cube along first axis, as well as the contribution of synthetic envelope components by the second cube along the second axis would be parallel / equal. As such the total contribution of 3-sub cubes (two along first axis and two along second axis but both availing the first cube as first for both set ups) would be as follows

Contribution by sub cube	Vol.	Surf.	Edges	Corner points	Total comp.	Grand total
First	1	6	12	8	27	27
Second	1	5	8	4	18	45
Third	1	5	8	4	18	63

31. The contribution by the fourth sub cube as second sub cube of second row would be as follows:

Contribution by sub cube	Vol.	Surf.	Edges	Corner points	Total comp.	Grand total
First	1	6	12	8	27	27
Second	1	5	8	4	18	45
Third	1	5	8	4	18	63
Fourth	1	4	5	2	12	75

32. It would be a blissful exercise to reach at the contribution by each of the four sub cubes of second set of sub cubes and to have a comprehensive view of the components of the synthetic set up of eight sub cubes as a cube:

Contribution by sub cube	Vol.	Surf.	Edges	Corner points	Total comp.	Grand total
First	1	6	12	8	27	27
Second	1	5	8	4	18	45
Third	1	5	8	4	18	63
Fourth	1	4	5	2	12	75
Fifth	1	5	8	4	18	63
Sixth	1	4	5	2	12	75
Seventh	1	4	5	2	12	87
Eighth	1	3	3	1	8	95

33. Here it would be relevant to note that if the volumme component contribution by each sub group is not taken into consideration, then we would be left with precisely 87 components in all.

34. One shall have a pause here and have a fresh look at the set up of artifice '87' which takes us from artifice value 7 at unit place to artifice value 8 at the next place value.

35. This shift from artifice 7 to artifice value 8 is parallel to a shift from 7 geometries range of 3-space to 8 solid components of boundary of 4-space.

36. Further as that NVF (Truth) = 87 = NVF (Space frame).

37. Further it also would be relevant to take note that hyper circles 1 to 7 increase while hyper circle 8 onward start decreasing.

38. One may further have a pause here and take note that NVF (Renewing) = 95.

39. The artifice 95 avails artifice value 5 at unit place while artifice 9 is being availed at the next place value.

40. The coordination of artifice 9 and 5 is like the coordination of middle numeral '5' with last numeral 9 of ten place value system.

41. One may have a pause here and note that the surface base coordinating the pair of quadruple sub cubes is a set up of the square of four quarter square.

42. It is a set up of '9 points, 8 lines and 4 surfaces'.

43. With total summation value 9+8+4 = 21.

44. The re-organization of artifice 21 = 1 x 3 x 7.

45. It further re-organizes as 1+2+3+4+5+6 = 21.

46. Let us have a pause and have a fresh look at the solid geometry of hyper cube 4 being a set up of eight solid components.

47. These 8 solid components / cubes, themselves are compositions of 8 sub cubes each.

48. Each cube as boundary component and as a set up of 95 components set up, on the one hand shall be having one base face of 21 components touching 4-space domain of hyper cube 4 while another similar surface of 21 components shall be synthesizing with the next solid boundary components, and as such there shall be 21 + 21 = 42 components which would stand absorbed in synthesis process and the balance components would remain 95 - 42 = 53 for each of the 8 solid boundary components.

49. Here it would be relevant to note that NVF (Axis) = 53.

50. It is a set up of a solid dimensional axis / 3-space in the role of dimension of a transcendental domain (5-space) as a domain.

51. It would help us appreciate that each of these solid boundary components which would be stripped off in reference to each of the eight boundary components would be ‘a solid dimensional set up’.

52. Further here it would be relevant to note that 8 = 5 + 3.

53. Still further it also would be relevant to note that 5-space plays the role of dimension of 4-space.

54. Still further as that 4-space itself is a spatial dimension set up and as such the spatial set up for dimensional axis along both the axis shall be requiring as many as 3 solid dimensions and the balance 5 solid dimensions shall be structuring a 5-space domain.

55. Still further it also would be relevant to note that externally (outside of hyper cube 4-space) as well as internally (origin of 4-space) there shall be a reach at 5-space.

56. One shall have a pause here and permit the transcending mind to be face to face with this transcendental phenomenon and to chase the structuring of external space of 4-space as well as internal structuring of 4-space at its origin.

57. It also would be a blissful exercise to chase 53 x 8 = 424, a set up of a reach at the middle from either end in terms of a spatial order of 4-space.

58. Still further it would be relevant to note that the manifestation layer (2, 3, 4, 5) is of the features of hyper cube 4 of spatial order, solid boundary, hyper solid domain and the transcendental origin.

59. One may further have a pause here and permit the transcending mind to chase the set up of an octagon / polygon of 8 sides within a plane / 2-space.

60. Here it would be relevant to note that solid boundary as a domain is of a linear dimensional order and as such the linear boundary of octagon shall be linear dimensional set up (printout) of solid boundary of eight component of hyper cube 4.

61. The surface of octagon as such shall be the printout of the spatial dimensional order of creator's space (4-space).
62. As internally every octagon structure another octagon and the process goes on ad-infinitum accepting common center for whole range of octagons, as such the center of octagon distinguishing itself from all other points of the octagon.
63. The circle touching the middle points of the sides of octagon and the square within the circle with its corner points on the circumference of the circle, are the set ups which shall be leading us to many pure and applied values of Ganita Sutra-4 in particular.

64. Further the square with its corner points at alternative corners of the octagon is the set up which also shall be leading to many features of pure and applied values of the set up.

65. One may have a pause here and permit the transcending mind to be face to face with the features of 4-space accepting linear order boundary and

solid order origin, which would mean that the linear order boundary when stripped off, the same intervals (at origin) are externally as well structures the space as transcendental domain of creative boundary.

66. One may further have a pause here and be face to face with the phenomenon of transcendental values flow from ‘origin of 4-space’ and the 4-space (domain) transiting and transforming and the role of creative boundary of transcendental domain.

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Dr. S.K. Kapoor