**ORGANIZATION FORMAT OF GANITA SUTRAS**

**VM Course Part-07 – Ganita Sutras 8 to 16**

### Step 61 : Transition from Ganita Sutra-7 to Ganita Sutra-8

1. To comprehend, appreciate and to imbibe the organization features of Ganita Sutra-8, it would be of great help to chase transition from Ganita Sutra-7 to Ganita Sutra-8.

2. The transition from Ganita Sutra-7 to Ganita Sutra-8, in fact, inherently would be a transition from 'Ganita Sutra-1 to 7' to Ganita Sutra-8.

3. This transition would be parallel to the transition from artifices 1 to 7 to artifice 8.

4. To begin with one may have a focus of the features of artifices '7' and '8'.

5. Artifice 7 accept re-organization as 7 = 2 x 3 + 1, which is parallel to 7 geometries range of 3-space

6. This interlinking features of artifices 3 and 7 is designated as '*Trishapta*'

7. Here it would be relevant to note that 8 corner points of a cube permit sequential coordination in terms of seven edges of the cube

8. One may have a pause here and permit the transcending mind to be face to face with this feature of coordination of eight corner points of a cube in terms of 7 edges of the cube, as a feature in terms of which the transition from artifice 7 to artifice 8 may be appreciated

9. The feature of the set up of the cube as that with stripping it off, of its all the six surface plates, emerges seventh version of the cube parallel to seventh geometry of 3-space

10. Further as that, the domain fold of hyper cube 3 / cube of four fold manifestation layer (1, 2, 3, 4) as representative regular body of 3-space manifesting 3-space 3 content on the format of volumme of the cube, as such permit split itself as 8 sub cubes parallel to 8 octants cut of 3-space

11. One may have a pause here and permit the transcending mind to be face to face with origin of 3-space, that is 4-space playing the role of origin fold of 3-space domain

12. Here it would be relevant to take note that hyper cube 4 accepts solid boundary of 8 components

13. This feature of hyper cube 4 as that it has solid boundary of 8 components is parallel to the feature of cube permitting split into 8 sub cubes and those together are enveloping center of the cube where corners of sub cubes meet.

14. One may have a pause again and permit the transcending mind to be face to face with the feature of corner points of 8 sub cubes meeting at center of the cube as seat of origin of 3-space of format of hyper cube 4

15. This feature would further help appreciate the transition from artifice 7 to artifice 8 and parallel to it the seventh geometry of 3-space transiting into the solid boundary of 8 components of hyper cube 4 manifesting as origin format for 3-space at center of the cube

16. This transition from artifice 7 to artifice 8 is infact parallel to cube / representative regular body of 3-space to cube / hyper cube 3 to hyper cube 4 the representative regular body of 4-space

17. Infact this would be parallel to a transition from a set up of 3-space to set up of 4-space

18. This transition from set up of 3-space to set up of 4-space, infact is the transition from linear order set up to spatial order set up

19. The transition from linear order set up to spatial order set up focuses upon the transition from linear order to spatial order

20. This feature of transition from linear order to spatial order  is of the features of a transition from the role of 1-space as dimension to role of 2-space as dimension

21. This transition from role of 1-space as dimension to role of 2-space as dimension shall be focusing upon  the transition from 1-space to 2-space

22. The transition from 1-space to 2-space shall be parallel taking to transition from artifice 1 to artifice 2

23. This transition from artifice 1 to artifice 2 would be leading to a transition from number 1 to 2

24. One may have a pause here and take note that numbers 1 and 2 are accepting structural progression rule of Ganita Sutra-1 being 'one more than before'

25. One may have a pause here and take note that artifices (1, 2) structure numbers (3, 4)

26. It is this role of artifices as numbers and artifices as numbers structuring numbers deserves to be comprehended well and to be thoroughly imbibed, which in the context of the dimensional spaces shall be a focus upon the parallel feature 'dimension as domain' and 'dimension structuring domain'

27. Illustratively '1-space'  as dimension shall be structuring 3-space as domain

28. Simultaneously 1-space itself as domain gets structured in terms of (-1) space as dimension

29. This feature as such leads to triple spaces set up (-1 space, 1 space, 3 space)

30. One may have a pause here and take note that this triple (-1 space, 1 space, 3 space) as a double jump firstly over 0-space and secondly over 2-space

31. One may further have a pause here and take note that parallel to triple space (-1 space, 1 space, 3-space) would follow triple spaces (0 space, 2-space, 4-space) coordinated by the feature of 'dimension of dimension, dimension, domain)

32. One may have a pause here and be face to face with the simultaneous existence of pair of triples (-1, 1, 3) and (0, 2, 4)

33. It shall be leading to a self referral features of 6 fold self referral range (-, 0, 1, 2, 3, 4) splitting into a pair of triples (-1, 1, 3) and (0, 2, 4)

34. This feature of 6-space and parallel to it of 6 fold self referral range synthesizing a pair of transcendence phenomenon at dimension of dimension level deserves to be chased

35. One shall sit comfortably and permit the transcending mind in prolonged deep sitting of trans and to be face to face 6-space / hyper cube 6 / artifice 6 / six fold self referral range, particularly, amongst other the following :
    i.      Six plays the role of 8 space
    ii.     Boundary of 3-space is of six component, boundary of 4-space is of eight components
    iii.    $8 = 4 + 4 = 2 \times 2 + 2 + 2 = (-2) \times (-2)$
    iv.     $2 + 2 + 2 = 6$ while $2 \times 2 \times 2 = 8$
    v.      $I + 2 + 3 = 1 \times 2 \times 3$
    vi.     $2 \times 3 = (-2) \times (-3)$
    vii.    4-space plays the role of dimension of 6-space
    viii.   $2 + 2 = 4 = 2 \times 2 = (-2) \times (-2)$
    ix.     0 space plays the role of dimension of 2-space
    x.      $0 + 0 = 0 = 0 \times 0 = (-0) \times (-0)$

36. The super imposition and unification of addition and multiplication operation as well as of pair of orientations (addition and minus values)

are the features which deserve to be chased in the context of triple (0, 2, 4) and (2 , 4, 6) and further as (4, 6, 8)

37. The above triple triples namely (0, 2, 4), (2, 4, 6) and (4, 6, 8) can be chased as pair of quadruples (0, 2, 4, 6) and (2, 4, 6, 8)

38. Parallel to it the triple triples (1, 3, 5), (3, 5, 7) and (5, 7, 9) shall be permitting a chase as a pair of quadruples (1, 3, 5), (3, 5, 7)

39. This two fold chase as pair of quadruples and as triples of triples of whole range of numerals and place value of ten place value namely of the range (0, 1, 2, 3, 5, 6, 7, 8, 9), in the light of the artifices equation $10 = 1 + 2 + 3 + 4$ shall be bringing us face to face with the features of spatial order 4-space

40. It shall be focusing u0pn '2' a s'1' and '1 as 2' as working rule of mathematics of spatial order 4-space

41. One may have a pause here and permit the transcending mind to be face to face with the transition features leading from '1 as 1', as working rule of linear order 3-space and '2 as 1' and '1 as 2' holding simultaneously as a working rule of spatial order 4-space

42. The working rule of Ganita Sutra-1, 'one more than before' leads us from ' 1 to2' However the working rule of spatial order 4-space also takes us that from '2 to 4'.

43. It is feature of going from 1 to 2 and back 2 to 1 which brings '3' in between 1 and 2.

44. On may have a pause here and take note that artifices pair (1, 2) leads to artifices triple (1, ½, 2)

45. With back orientation triple (1, 1 ½, 2) shall be leading to (2, 1 ½, 1)

46. The super imposition of orientations shall be doubling the 'middle' domain without effecting boundary 'ends'

47. The format of an interval which accept super imposition of orientations may help us comprehend, appreciate and imbibe the feature as that going from one end point to the other end point and back from second end point to the first end point amount to deciphering of: 'orientations without effecting the end points'.

48. Here it also would be relevant to note that the change of orientations also does not effect the length

49. With it, the middle artifice pair, that is, (n+n+1) / 2 would remaining constant for both orientations

50. This availability of constant middle value would get doubled with superimposition of orientations, and would follow triple (n, n+2, n+1).

51. It would be relevant to note that if we have to reach at middle, as first step we have to fix first point and as second step we have to fix second point and as third step we can fix and reach at the middle of the fixed pair of points

52. Here it would be relevant to note that the emergence of double of the middle value at the middle because of super imposition of orientations would require halving thereof to reach at the middle value.

53. It is this feature of simultaneous doubling and halving deserves to be chased to comprehend and imbibe the spatial order -4space

54. One way to appreciate is in terms of quadruple artifices (1, 2, 3, 8)

55. The artifices quadruple (1, 2, 3, 4) permits re-organistion  1 x 1, 2 x 1, 3 x 1, 4 x 2.

56. This as such focus upon the fourth artifice and parallel to it would be a focus upon the fourth fold namely origin fold of the four fold manifestation layer  of hyper cube

57. The other way to reach at feature (s) of spatial order is in terms of the mathematics of synthesis of dimension folds

58. Synthesis of linear order dimensions sequentially lead us to values sequence 1 for single dimension, 3 for pair of dimensions, 6 for triple dimensions, 10 for four dimensions and so on

59. This sequence of value (1, 3, 6, 10, ---) is parallel to the summation values of '1 as 1', '1 and 2' as 3, '1, 2, 3' as 6 and so on and in general the summation value of '1, 2, 3, ----n' being $(n \times n + 1) / 2$

60. Here for $n = 0$ the value would be $(0 \times 1) / 2 = 0 / 2 \times 1/2$

61. One may have a pause here and take note that $0 / 2$ emerges as an entity which permits its half

62. Now let us have a focus upon the triple (-1, 0, 1).

63. The artifices pair (-1, 0) shall be permitting '1' at its middle

64. The value '1' at middle of '-1, 0' shall be leading us to triple '-1, 1, 0' with middle artifice '1' being double of the middle value '1/2'

65. This with the feature of orientation super imposition which shall be taking us from +1/2 to -1/2, shall be helping us having sequential ordering triple '-1, -1/2, -0'

66. This triple (-1, -1/2, -0) shall be leading to (0, 1/2, 1) with change of orientation

67. The composite sequential ordering (-1, -1/2, -0) = (+0, 1/2, 1) shall be focusing upon pair of orientations for '0' value getting neturalized by super imposition

68. It is this feature of zero value, as value of '0-space' which deserves to be comprehended well and to be imbibed thoroughly

69. Every value 'n' accepting a pair of orientations and those netruralizing themselves with superimposition as n-n=0 leads us to the split for interval (domain) as triple (-1, 0, +1)

70. It is this feature of split of interval domain as triple (-1, 0, 1) and parallel to it (-1 space, 0 space, 1 space) together as first three folds of a manifestation layer and also as these being a neutralized 0-space shall be structuring 2-space as origin fold.

71. Here it would be relevant to note that the artifices triple (-1, 0, 1) shall be indicative of (0) being the source of pair of orientations and same as well being of the feature of neturalizing of the orientations.

72. It is this feature of being a source of orientations as well as a source of neturalization thereof which deserves to be comprehended well and to be thoroughly imbibed

73. One shall have a pause here and permit the transcending mind to be face to face this phenomenon of neutralization of orientation and triple (-1, 0, 1) as pair of pairs (-1, 0) and (0, 1) transiting and transforming into a pair of identical values pairs (0, 1) and (0, 1) and thereby there standing constructed a 2-space with 0 space as dimension of 2-space.

74. With it 0 space like all other dimensional spaces acquiring parallel features for its content as well deserves to be chased as such

75. With this doubling and halving feature, in reference to the middle value of domain folds as such shall be focusing upon the transition features from first half to the second half of the domain and parallel to it, that way would focus upon the middle of artifices triple 6, 7 and 8 and thereby the increase of hyper circles 1 to 7 and decrease of hyper circles 8 onwards shall be taking place at the middle of artifices 7 and 8.

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