ORGANIZATION FORMAT OF GANITA SUTRAS

Step 54 : Dimension folds sequence

1. The dimension folds sequence is of distinctive features than those of domain fold sequence or any other folds sequence

2. The basic feature of dimension fold is that its syntheizes with itself and structures the domain fold

3. This synthesis structuring features of dimension folds deserves to be chased

4. The synthesis structuring feature leads to a dimensional synthesis mathematics and technology

5. The following tabulation depicts the dimensional synthesise values of whole range of dimensional orders synthesizing as any number of dimensions of such orders :

-9	-7	6	30	65	111	168	226	315
-8	-6	6	28	60	102	154	206	288
-7	-5	6	26	55	93	140	196	261
-6	-4	6	24	50	84	126	176	234
-5	-3	6	22	45	75	112	156	207
-4	-2	6	20	40	66	98	136	180
-3	-1	6	18	35	57	84	116	153
-2	0	6	16	30	48	70	96	126
-1	1	6	14	25	39	56	76	99
0	2	6	12	20	30	42	56	72
+1	+1	0	-2	-5	-9	-14	-20	-27
1	3	6	10	15	21	28	36	45
2	4	6	8	10	12	14	16	18
3	5	6	6	5	3	0	-4	-9
4	6	6	4	0	-6	-14	-24	-36

5	7	6	2	-5	-15	-28	-44	-63
6	8	6	0	-10	-24	-42	-64	-90
7	9	6	-2	-15	-33	-56	-84	-117
8	10	6	-4	-20	-42	-70	-104	-141
9	11	6	-6	-25	-51	-84	-124	-168

Note Step 48 explains features of this table

6. Dimensional fold sequence parallel to domains fold sequence (1, 2, 3, 4, ----) is (-1, 0, 1, 2, ---)

7. To appreciate this dimension fold, domain fold pairing as (n-space as dimension fold, 3-space as domain fold) and in general (n-space as dimension fold, n+2 space as domain fold, need would be to focus upon the coordination rule of domains folds of values (length, area, volumme, hyper volumme), as the working rule of Ganita Sutra – 1 ‘one more than before’.

8. One may have a pause here and take note that the coordination of domain’s fold, as per the working rule of Ganita Sutra-1 ‘one more than before’, in fact is focusing upon the number of axes of the dimensional frames of the concerned dimensional spaces whose content manifests as the domain fold (within the respective dimensional frame).

9. This focus of domains folds sequence upon dimensional frames, and particularly about the number of the dimensions of dimensional frame, that way interlinks domain folds with dimensional frames, and ultimately with the dimension folds.

10. Illustratively, cube as representative regular body of 3-space with 3-space content manifesting as domain fold of hyper cube 3 as cube shall be focusing upon manifestation of 3-space content within a three dimensional frame of 3 linear dimensions.

11. This structuring feature of domain fold of hyper cube 3 in terms of linear dimensions (1-space content manifesting as dimension fold of hyper cube 3) deserves to be chased.

12. In the context it would be relevant to take note that sequential order of four folds manifestation layers of hyper cube 1 / (1, 2, 3, 4) / (1 space as

dimension fold, 2-space as boundary fold, 3-space as domain fold, 4-space as origin fold) shall be helping us comprehend, appreciate and imbibe the feature of this sequential order of manifestation folds as that 1-space as dimension fold jumps through 2-space as boundary fold (1-space as boundary of boundary of 3-space) and structures 3-space.

13. It is this feature of structuring by dimension fold of domain fold by jumping over the boundary fold by remaining at boundary of boundary, deserves to be chased to comprehend it fully and to imbibe it completely, as its inherent charactertics of jumping over boundary by remaining at boundary of boundary focuses upon the nature of the geometric formats for bridging the gaps in between the separated (non consecutive) members of the sequence.

14. One may have a pause here and permit the transcending mind to be face to face with this phenomenon of geometric formats bridging the gaps.

15. It infact is the transition from the set ups of discrete (s) to the set ups of connected sequential ranges

16. The illustrative case of hyper cube 1 of manifestation layer (-1, 0, 1, 2) shall be helping us comprehend, appreciate and to imbibe the feature of 0-space as boundary fold of hyper cube 1 as a gap value between (-1) and (+1) and parallel to it 0-space located within (-1) space and +1 space

17. One may have a pause here and take note that 0 space / 0 value as boundary fold value with (-1) space and (+1) space / (-1) value and (+1) value on its either side, shall be helping us comprehend, appreciate and imbibe the two fold orientation feature of ‘0’, which takes us to boundary fold to dimension fold on its left side and boundary fold to domain fold on its right side.

18. This pair of orientations for the circumference of a circle when viewed vis-à-vis the pair of orientations of a line, it would help us comprehend, appreciate and imbibe as to how the pair of orientations features of line / 1-space is retained even while the line transit and transform as circumference of a circle and envelops 2-space / surface area of a circle

19. One may have a pause here and take note that 2n components of boundary of hyper cube n, permits split as $2n = (n-1) + (n+1)$.

20. It would be relevant to note that triple (n-1, n, n+1), as such would be parallel to the set ups along the format of triple (-1, 0, 1).

21. Further it also be relevant to note that the split of 2n = (n-1) + (n+1) is parallel to the coordination of dimension fold and domain fold as artifices pair (n, n+2) as that (n+2) – n = 2 = (n+1) – (n-1)

22. Still further, it also would be relevant to note that this split and pairing (n-1, n+1) works out a grid zoning of n-1 x n+1 matrix format

23. Further as that n-1 x n+1 matrix format is parallel to the organization of double digit numbers of n place value system.

24. Illustratively double digit numbers of 10 place value system permit organization as 9 x 11 matrix format as follows as an arrangement of 9 columns parallel to the range of 9 numerals and 11 rows:

01	02	03	04	05	06	07	08	09
10	11	12	13	14	15	16	17	18
19	20	21	22	23	24	25	26	27
28	29	30	31	32	33	34	35	36
37	38	39	40	41	42	43	44	45
46	47	48	49	50	51	52	53	54
55	56	57	58	59	60	61	62	63
64	65	66	67	68	69	70	71	72
73	74	75	76	77	78	79	80	81
82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99

25. Here it also would be relevant to note that this format of grid zoning as 9 x 11 matrix format is parallel to the coordination of 9 geometries of 4-space with 11 geometries of 5-space

26. This in a way is a chain of features of hyper cube 5 format whose transcendental domain (5-space as domain) admits creative boundary (4-space in the role of boundary) of ten components.

27. This would help us comprehend, appreciate and to imbibe the features of format of hyper cube 5, ten place value system, 9 x 11 grid format and all that.

28. One may have a pause here and take note that hyper cube 5 is of the features of four fold manifestation layer (3, 4, 5, 6) / (3-space in the role of dimension, 4-space in the role of boundary, 5-space in the role of domain and 6-space in the role of origin.

29. It would be relevant to note that artifices pair (3, 5) with summation value (3+5) = 8 = 2 x 4 is parallel to boundary of solid order space (5-space) accepts boundary of boundary of 8 solid components

30. One may have a pause here and permit the transcending mind to be face to face with this phenomenon of 3-space playing the role of dimension of 5-space and further 3-space also playing the role of boundary of 4-space

31. Still further 3-space permits cut as eight octants and parallel to it cube, the representative regular bodies of 3-space, permit split as eight sub cubes

32. One may further have a pause and have a fresh look at the set up of hyper cube 5 as a manifestation layer (3, 4, 5, 6) and the set up of boundary of boundary of hyper cube 5 being solid boundary of eight components of 4-space.

33. This as such shall be focusing upon the triple artifices (3, 4, 5) as first three folds of the manifestation layer (3, 4, 5, 6) as that 3+5= 8 = 2 x 4 with 4 as the middle value of the triple (3, 4, 5).

34. Still further it also would be relevant to note that while 3-space is a linear order space, 4-space is a spatial order space

35. It would help us appreciate as to how the middle value of the triple (3, 4, 5) as such is of half of the summation value of the end values of the triple, i.e. 4 = (3 + 5)/2

36. This feature of triple consecutive artifices is there because of their role as first three manifestation fold of four fold manifestation layer

37. Let us have a fresh look at the split up of eight solid components of boundary of 4-space as artifices pair (3, 5) which is parallel to 3-space in the role of dimension of 5-space

38. Here it would be relevant to note that the pair of solid components shall be structuring hyper solid 5 domain, and that way 8 solid boundary components as a set up of four solid pairs that way shall be structuring four times hyper solid 5 domain

39. Further as that 5 space as origin fold of 4-space, shall be augmenting above four times structuring of hyper solid 5 domain by having structured it fifth time, and as such five time structuring of hyper solid 5 would be dominating feature of a solid dimensional domain

40. It would be relevant to note that 5-space in the role of origin of 4-space being a spatial order space shall be splitting the solid dimensional order of 5-space / three dimensional frame into a pair of three dimensional frames and that being so the origin of 4-space shall be augmenting structuring of hyper solid 5 domain as 5^{th} dimension structure.

41. One may have a pause here and permit the transcending mind to chase such dimensional structuring for hyper cube n for all values of n.

42. Still further it also would be relevant to note that the 2n boundary components of hyper cube n shall be coordinated by n dimensions of hyper cube n

43. This as such shall be amounting to that each dimension of hyper cube n is coordinating a pair of boundary components

44. This coordination of pair of boundary components by a dimension is a coordination of one boundary component at one end of the dimension

45. Illustratively two boundary components (points) of 1-space / line are coordinated by the single dimension of 1-space along its end points

46. Likewise four boundary components of 2-space / four boundary lines of square are coordinated by the pair of dimensions of 2-space

47. It would be a blissful exercise to chase coordination of six surface plates of cube with / in terms of three linear axes

48. One may have a pause and have a fresh look at the set up of coordination of boundary components of hyper cube n in terms of n dimensions of n space

49. One may have a pause here and permit the transcending mind to be face to face with a void box / empty cube / cube devoid of volumme content

50. Simultaneously one shall be face to face with a cube filled with Earth, to be designated as Earth cube and further the cube filled with water (water cube), with fire (fire cube) with air (air cube), with space (space cube) and with Sun (sun cube) and with pole star (pole star cube)

51. One may further have a pause and permit the transcending mind to be face to face with the set up of a cube as eight sub cubes synthesizing a cube

52. These features of the set up of cube and in general of hyper cube of any order, deserve to be comprehended and to be imbibed for their pure and applied values of geometric formats for chase of existence phenomenon of Earth to Sun range

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