ORGANIZATION FORMAT OF GANITA SUTRAS

Step – 48: Split and integration of axis

1. The split and integration features of :
   - (i) axis
   - (ii) axes and
   - (iii) axes (s)

2. Can be appreciated with the help of the tabulation of synthesis values of dimensions of all orders .

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-------------------------------------------------------------------
-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
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3. The above table can be extended column wise as well as rows wise.

4. The rule for extension is indicated in the above central strip :

+1   +1   0   -2   -5   -9   -14   -20   -27

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5. The first column entry (+1) means that the rule by which the value of this columns are computed are by the rule of 'add one' in the given entry of the column to reach at the entry immediately below. And to subtract one to reach at the entry immediately below.

6. The rule for the second column is as well 'to add +1' for the immediately below entry and subtract one for the immediately above entry.

7. Here it also would be relevant to note that the shift from the first column rule of +1 to the rule of the second column '+1' would mean that the transition is by the value '0' only.

8. Likewise the rule for the third column is to add 0 for the immediately below entry and to subtract 0 for the immediately above entry.

9. Further as that the transition from second column +1 to third column value '0' amounts to subtraction of '1'.

10. Likewise for the construction of the values of column four, rule is to subtract 2 from the entry for its immediately below entry and to add 2 for the immediately above entry.

11. This as such shall make out that for the transition from rule of third column to rule of fourth column, there shall be a subtraction of value 2 from the value of column 3.

12. One may have a pause here and take note that
    i.   For transition from the rule of column 1 to column 2, the value '0' shall be subtracted from the rule value of column 1 i.e. from '1' to reach at 1-0=1

ii. For transition from the rule of column 2 to column 3, the value '-1' shall be subtracted from the rule value of column 2 i.e. from '1' to reach at the 1-1=0

iii. For transition from the rule of column 3 to column 4, the value '2' shall be subtracted from the rule value of column 3 i.e. from '0' to reach at the 0-2=-2

iv. For transition from the rule of column 4 to column 5, the value '-3' shall be subtracted from the rule value of column 4 i.e. from '-2' to reach at the -2-3=-5

v. Likewise the transition from first column to second column, second column to third column, third column to fourth column and so on can be attained by following the symmetric rule:

    i.   1-0=1
    ii.   1-1=0
    iii.   0-2=-2
    iv.   -2-3=-5
    v.   -5-4=-9
    vi.   -9-5=-14
    vii.   -14-6=-20
    viii.   -20-7=-27
    ix.   -27-8=-35
    x.   -35-9=-44
    xi.   -44-10=-54
    ------

13. From the above it can be observed that column 1 is structured sequentially by the rule of add 1.

14. Column 2 is structured by the rule of add 1.

15. Column 3 is structured by the rule of add 0.

16. Column 4 is structured by the rule of subtract 2.

17. Column 5 is structured by the rule of subtract 5.

18. Column 6 is structured by the rule of subtract 9.

19. Column 7 is structured by the rule of subtract 14.

20. Column 8 is structured by the rule of subtract 20.

21. Column 9 is structured by the rule of subtract 27.

22. Column 10 is structured by the rule of subtract 35.

23. And, likewise, the values of every and all the columns can be constructed by the addition / subtraction of a specific artifice value for a given column, which value as such can be taken as structural index of the column.

24. This, this way would help us comprehend, appreciate and imbibe the structural rule of each column in terms of its structural index value which being constant and as such it will make out that each column is an integrated sequential axis / domain, domain feature which integrates the axis as synthesis of the given number of dimensions of every dimensional order.

25. It is this feature which, that way becomes the central feature of the organization format of Ganita Sutra-7.

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