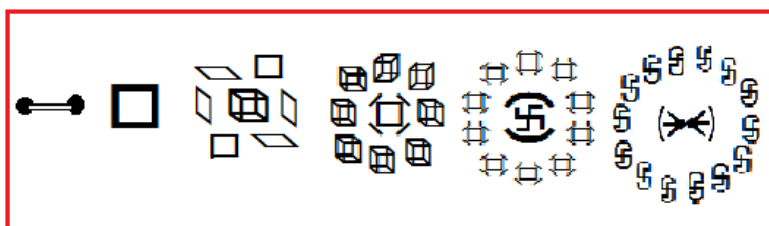


VEDIC MATHEMATICS

&

MODERN MATHEMATICS

SATHAPATYA MEASURING ROD



(HYPER CUBES 1 TO 6)

Consolidated Steps of learning and teaching of Vedic mathematics, Science & Technology

STEP – 12

Dimensional synthesis and Domain splits spectrums

1. Twelfth learning and teaching step of Vedic mathematics, Science & Technology is learn about the dimensional synthesis and domain split spectrum
 - i. Value of single dimension of order n is 'n'.
 - ii. Value of pair of dimensions of order n is $(n, n) = n + 2$.
 - iii. Value of triple dimensions of order n is $(n, n, n) = [(n, n), n]$
 $= (n + 2) + n - 2 \times (n - 2)$
 $= 6$
 - iv. Value of quadruple dimensions of order n is $(n, n, n, n) = [(n, n, n), n]$
 $= 6 + n - 3(n - 2)$
 $= 12 - 2n$
 - v. Value of 'r' dimensions of order n is
 $=$ Value of (r-1) dimensions of order n
 $+ n - (r - 1)(n - 2)$
2. The dimensional synthesis of dimension of same order sequentially leads us to values array as under :
 3. For $n = 1$, values of synthesis of dimensions of order 1 comes to be:
(1, 3, 6, 10, 15, 21, 28, ---)
 4. For $n = 2$, values of synthesis of dimensions of order 2 comes to be:
(2, 4, 6, 8, 10, 12, 14, ---)
 5. For $n = 3$, values of synthesis of dimensions of order 3 comes to be:
(3, 5, 6, 6, 5, 3, 0, ---)
 6. For $n = 4$, values of synthesis of dimensions of order 4 comes to be:
(4, 6, 6, 4, 0, ---)

7. For $n = 5$, values of synthesis of dimensions of order 5 comes to be: (5, 7, 6, 2, -5, ---)
8. For $n = 6$, values of synthesis of dimensions of order 6 comes to be: (6, 8, 6, 0, 10, ---)
9. For $n = 7$, values of synthesis of dimensions of order 7 comes to be: (7, 9, 6, -2, -15, ---)
10. For $n = 0$, values of synthesis of dimensions of order 0 comes to be: (0, 2, 6, 12, 20, 27, 35, ----)
11. For $n = -1$, values of synthesis of dimensions of order (-1) comes to be: (-1, 1, 6, 14, 25, 33, 42, ----)
12. For $n = -2$, values of synthesis of dimensions of order (-2) comes to be: (-2, 0, 6, 16, 30, 39, 49, ----)
13. For $n = -3$, values of synthesis of dimensions of order (-3) comes to be: (-3, -1, 6, 18, 35, 45, 56, ----)
14. For $n = -4$, values of synthesis of dimensions of order (-4) comes to be: (-4, -2, 6, 20, 40, 51, 63, ----)
15. For $n = -5$, values of synthesis of dimensions of order (-5) comes to be: (-5, -3, 6, 22, 45, 57, 70, ----)
16. For $n = -6$, values of synthesis of dimensions of order (-6) comes to be: (-6, -4, 6, 24, 50, 63, 77, ----)
17. For $n = -7$, values of synthesis of dimensions of order (-7) comes to be: (-7, -5, 6, 26, 55, 69, 84, ----)
18. The dimensional splits spectrum for order n sequentially leads to array of dimensional axes set ups as under:
 - (i) Position at the initial stage is of single dimension order 'n'
 - (ii) Position at the first split stage for dimension order n would be a pair of dimensions of order $(n - 2)$ and also simultaneously there would be a release of dimension of order $(n - 4)$ being the dimension of dimension of order n .

(iii) Position at the second split stage for pair of dimensions of order $(n - 2)$ would be that there would be two pairs of dimensions of order $(n - 4)$.

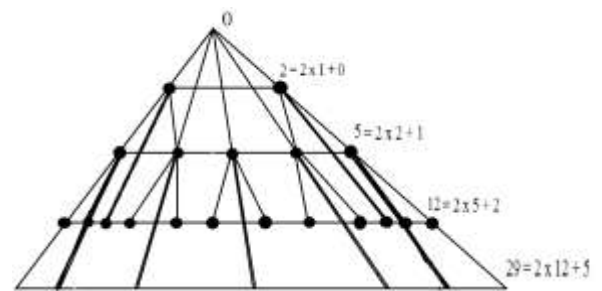
At this stage, also would be available the above dimension of dimension release of order $(n - 4)$ and thereby there would be an availability of spectrum of five dimensions of order $(n - 4)$.

Further there also would be a release of a pair of dimensions of dimensions of order $(n - 6)$.

(iv) At third stage of split there would be available five pairs of dimensions of order $(n - 6)$ which together with above release of a pair of dimensions of dimensions of order $(n - 6)$ shall be making out a spectrum of array of as many as twelve dimensions of order $(n - 6)$. In addition there would be array of five dimensions of dimensions of order $(n - 8)$.

(v) Further at next stage of split spectrum there would be $2 \times 12 + 5 = 29$ dimension array of order $(n - 8)$. In addition there would be an array of 12 dimensions of dimensions of order $(n - 10)$.

(vi) A step ahead, at next stage of split spectrum there would be $2 \times 29 + 12 = 70$ dimensions array of order $(n - 10)$. In addition there would be an array of 29 dimensions of dimensions of order 29.



19. In general the array of split spectrum dimensions would be of values

- (i) $1 = 1$,

- (ii) $1 \times 2 + 0 = 2$,
- (iii) $2 \times 2 + 1 = 5$,
- (iv) $2 \times 5 + 2 = 12$,
- (v) $2 \times 12 + 5 = 29$,
- (vi) $2 \times 29 + 12 = 70$,
- (vii) $2 \times 70 + 29 = 169$,
- (viii) $2 \times 169 + 70 = 408$,
- (ix) $2 \times 408 + 169 = 985$, ---

20. One may have a pause here and take note that the value of split spectrum at any stage is double of the value at previous stage plus value at previous of the previous stage.

21. One shall sit comfortably and have a fresh visit to the split spectrum of dimensions array values.

(1, 2, 5, 12, 29, 70, 169, 408, 985, ---)

22. One shall further have a fresh visit to the following split stage wise emergence of orders and numbers of dimensions.

Sn.	I	II	III	IV	V	VI	-
Order	n	n-2	n-4	n-6	n-8	n-10	-
Number	1	2	5	12	29	70	-
Of dim.							

23. It would be a blissful exercise to have a visit to split spectrum for different values of 'n'.

24. For $n = 9$, the split spectrum tabulation would be as under :-

Sn.	I	II	III	IV	V	VI	-
Order	9	7	5	3	1	-1	-
Number	1	2	5	12	29	70	-
Of dim.							

25. For $n = 10$, the tabulation comes to be as under :-

Sn.	I	II	III	IV	V	VI	-
Order	10	8	6	4	2	0	-
Number	1	2	5	12	29	70	-
Of dim.							

26. Here it would be relevant to note that the linear dimensional equivalence for 9-space in the role of dimension comes to be: $(9 \times 7 \times 5 \times 3 \times 1) = 945$ and that the split spectrum value $985 = 945 + 40$ while $40 = 4 \times 10$ which is parallel to the 40 coordinates fixation of creative boundary of 10 components of transcendental (5-space) domain.

27. Likewise would be relevant to note that the linear dimensional equivalence for 10-space in the role of dimension comes to be: $(10 \times 8 \times 6 \times 4 \times 2) = 3840$ and that the split spectrum value $3840 = 2378 + 1462$ while $1462 = 731 + 731$ which is parallel to a pair of Divya Ganga flow streams (7, 3, 1) along the artifices format of soul syllable Om of four components with Bindu Sarovar as the source reservoir

