## List 2 Different aspects of Vedic Mathematics

## Article 48 MANIFESTATION PLATES

## 1

# Interlocked synthetic set ups of cube as eight sub cubes and square as quadruple quarter squares 

Within 3-space, surface has a pair of faces.
Surface is a 2 -space set up. Square is the representative regular body of 2 -space. Square is a synthetic set up of quadruple quarter squares.

Square is a set up of 9 structural components, namely 4 corner points, 4 boundary lines $\&$ the area surface. First quarter square, as such contributes 9 structural components.

A synthetic set up of a pair of quarter square together contribute $9+6$ structural components. The $3^{\text {rd }}$ quarter square as well contributes 6 structural components and $4^{\text {th }}$ quarter square contributes only for structural components. This way a synthetic set up of quadruple quarter squares become a set up of $9+6+6+4$ $=25$ structural components.

The central surface plate of synthetic set up of 8 sub cubes, classifies sub cubes as of a pair of classes of quadruple sub cubes each. This pair of classes of quadruple sub cubes each may be designated as upper and lower classes of quadruple sub cubes.


The upper class of quadruple sub cubes is a synthetic set up of $27+18$ for the first row of pair of sub cubes and $18+12$ structural components for the second row of another pair of sub cubes.

The surface plate beneath these quadruple sub cubes is a set up of quadruple quarter squares of structural components $9+6$ for the first row and $6+10$ for the second row.

The structural components contribution of quadruple sub cubes, and of quadruple quarter squares of the surface plates make the following tabulation:

| Serial <br> Number | Sub cube <br> structural <br> components | Quarter squares <br> structural <br> components |
| :--- | :--- | :--- |
| First | $27=9 \times 3$ | $9=9 \times 1$ |
| Second | $18=6 \times 3$ | $6=6 \times 1$ |
| Third | $18=6 \times 3$ | $6=6 \times 1$ |
| Fourth | $12=4 \times 3$ | $4=4 \times 1$ |

Along the second phase of the surface plate there is manifestation of another class of quadruple sub cubes of structural components as follows:

| Serial <br> Number | Sub cube <br> structural <br> components | Quarter squares <br> structural <br> components |
| :--- | :--- | :--- |
| Fifth | $18=9 \times 2$ | $9=9 \times 1$ |
| Sixth | $12=6 \times 2$ | $6=6 \times 1$ |


| Seventh | $12=6 \times 2$ | $6=6 \times 1$ |
| :--- | :--- | :--- |
| Eighth | $8=4 \times 2$ | $4=4 \times 1$ |



The first class of quadruple sub cubes and there surface plates structural components make a ratio of (3:1), however the second class of sub cubes and quarter squares structural components make a ratio (2:1).

Formulations EK (एक), DWAE (द्वय) \& TRI (त्रय) are of transcendental code values as follows:
$\operatorname{TCV}($ एक) $=8, \mathrm{TCV}($ द्वय) $=16 \& \mathrm{TCV}($ (त्य $)=8$.
$\operatorname{TCV}$ (एक) $=8=\operatorname{TCV}$ (त्र्य)
TCV (द्वय) $=\mathrm{TCV}$ (एक) +TCV (त्र्य)
Within a square there is a manifestation of single axis format as well as of pair of axes format. These features of synthetic manifestations have their interlinking and inter-coordination of synthetic set ups of cubes as eight sub cubes and square as a synthetic set up of quadruple quarter squares.

## 2

## Ten directional frames



Quadruple directions are: East (पूर्व), West (पश्चिम), North (उत्तर) \& South (दक्षिण).

Quadruple sub directions are: North-East (ईशन कोण), North-West (वाव्य कोण), South-East (अग्नि कोण) \& South-West (नैऋल्य कोण).

Ninth and tenth directions are: Downward and Upward
Eight directions and sub directions formulations lead to transcendental code values of summation value 222 as under:

| पूर्व | 21 | 21 |
| :--- | :--- | :--- |
| पश्चिम | $\mathbf{2 2}$ | 43 |
| उत्तर | $\mathbf{1 6}$ | 59 |
| दक्षिण | $\mathbf{2 4}$ | $\mathbf{8 3}$ |
| ईशन कोण | $\mathbf{3 3}$ | $\mathbf{1 1 6}$ |
| अग्नि कोण | $\mathbf{3 0}$ | $\mathbf{1 4 6}$ |
| वाव्य कोण | $\mathbf{3 4}$ | $\mathbf{1 8 0}$ |
| नैऋत्य कोण | $\mathbf{4 2}$ | $\mathbf{2 2 2}$ |

Eight directional frames of four directions and four sub directions together with spatial order hyper cube of quadruple folds $(2,3,4$, 5) of summation value 14 makes grand summation values
$222+14=236$ parallel with the total letters of the text of ganita upsutras 1 to 13 .

Ninth and tenth directions formulations are of transcendental code values $9 \& 23$ respectively of summation value 32 which together with the summation value 222 of transcendental code values of eight directions and sub directions make a grand summation value $222+32=254$.


Ten directional frames together with creative origin seat at center of the cube, the representative regular body of 3 -space in 4 -space as a seat of brahma, creator's supreme makes additional contribution of value 29 parallel with TCV (ब्रह्मा) $=29$ makes the total value of this set ups of ten directional frames together with creative origin being $254+29=283$ parallel with 283 letters of the text of Ganita sutras 1 to 16 .

This interlocked and inter-coordinated set ups of eight directional frames and ten directional frames manifests the interlocked and inter-coordinated manifestation formats for Ganita sutras and upsutras.

