Sri – Om

VEDIC MATHEMATICS AWARENESS YEAR

E-Newsletter Issue no 82 dated 10-01-2015

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'Credit goes to Swami Bharti Krshna Tirtha Ji Maharaj to focus the attention of present generation about the values of Ganita Sutras (mental Mathematics Sutras)'

All are invited to join Awareness program

All are warmly invited to join the awareness program of Vedic Mathematics. All teachers, parents and students are invited to Learn and Teach Vedic Mathematics for proper intelligence growth at School.

> Dr. S. K. Kapoor Sh. Rakesh Bhatia Sh. Bhim Sein Khanna Sh. Deepak Girdhar - Organizers

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VMS & T Text books (Classes 9, 10, 11 & 12)

Outline of Text Book Class X

4-space

Lesson – 1 Lord Brahma Lesson – 2 Lotus Lesson – 3 4-space

Lesson - 3 4-space mathematics, Science & Technology

- 1. 4-space is a spatial order space.
- 2. Its Mathematics as such simultaneously accepts a pair of units '2 as 1' and '1 as 2' while 3-space Mathematics accepts and works with a single unit '1 as 1'.
- 3. Sciences of 3-space work out physical matter manifesting along the linear order format, while the 4-space sciences work out 4-space content in terms of its spatial order.
- 4. A reach from macro state to micros state within 4-space is there because of the spatial order of 4-space content.
- 5. Technologies of 4-space avail the format of hyper cube 4, as a four fold manifestation layer (2, 3, 4, 5) / 2-space as dimension, 3-space as boundary, 4-space as domain, 5-space as origin.
- 6. Vedic mathematics, Science & Technology avails the format of (Idol of Lord Brahma) along with which manifest, the whole range of hyper cubes.

- 7. Further the Discipline of Vedic mathematics, Science & Technology avails the transcendence feature of the format of Idol of Lord Brahma.
- 8. It is this transcendence feature of the format permitting transcendence at origin fold, which settles the transition and transformation from the format of given hyper cube to the format of next hyper cube.
- 9. This transition and transformation by way of transcendence from the format of a given hyper cube to the next hyper cube provides a transcendence from the four fold manifestation layer format to that of five fold transcendence range.
- 10.It is this attainment by way of transcendence from four fold manifestation format to five fold transcendence range for every pair of consecutive hyper cubes, is the feature which deserves to be comprehended well for its complete appreciation and proper imbibing to have full insight about it.
- 11.It is this inherent feature of manifested creations in 4-space along the format of idol of Lord Brahma, which that way distinguish the format, the features and values and Discipline of VMS & T from that of individual Disciplines of Mathematics, Sciences and Technologies of the space (4-space)
- 12.One may have a pause here and take note that the Discipline of VMS & T of 4space avails a pair of consecutive manifestation layers and in terms of it transition and transformation is attained from format of four fold manifestation layer to that of five fold transcendence range.
- 13.One may further have a pause here and take note that the Discipline of VMS & T (of 4-space) that way chases the compactification of origins (origin folds).
- 14.It is this feature of the Discipline of VMS & T of 4-space, which in a way attains transition and transformation from the format of artifice (4) to that of the format (4 x 4) grid / matrix format.
- 15. This transition from the format of artifice (4) to that of (4 x 4) grid / matrix format, because of the compactification of origin folds leads to arrangement of values along 4 x 4 formats for sixteen folds of four consecutive manifestation layers, viz.

| 1 | 2 | 3 | 4 |
|---|---|---|---|
| 2 | 3 | 4 | 5 |
| 3 | 4 | 5 | 6 |
| 4 | 5 | 6 | 7 |

- 16.One may have a pause here and take note that the summation value of all the sixteen folds of four consecutive manifestation layers comes to be $(1+2+3+4) + (2+3+4+5) + (3+4+5+6) + (4+5+6+7) = 64 = 4 \times 4 \times 4$.
- 18. One may further have a pause here and take note that sequentially the transitions can be reached as n, n x n, n x n x n for all values of n.

- 19.One may further have a pause here and take note that the organization of 16 folds of 4 consecutive manifestation layers, infact is availing the values of 7 steps long range (1, 2, 3, 4, 6, 7)..
- 20.One may further have a pause here and take note that sequentially the whole range of seven step long ranges (n, n +1, n+2, n +3, n +4, n + 5, n + 6) for all values of n can be worked out.
- 21. With it the Discipline of VMS & T of 4-space becomes the Discipline of very big range of pure and applied values
- 22.One may further have a pause here and take note that way format of above 7 steps long range interconnects format and features of artifice n with itself as well as with the range of subsequent 6 artifices namely (n + 1, n + 2, n + 3, n + 4, n+5, n+6)
- 23. Further parallel to it n-space content, that way manifests and coordinates with the spaces contents of n + 1 space, n + 2 space, n + 3 space, n + 4 space, n + 5 and n + 6 space
- 24.It is this interlinking of range of 7 consecutive dimensional space contents which deserve to be chased for its full comprehension
- 25. This interlinking range of 6 steps (n+1, n + 2, n +3, n + 4, n +5, n +6) deserve to be chased and comprehended as of format and features of pair of artifices (4, 6) which is of the format of 4-space as dimension and 6-space as domain

26. Accordingly VMS & T of 4-space deserve to be chased in reference to

- i. 4-space content
- ii. 4-space body
- iii. 4-space as dimension
- iv. 4-space as boundary
- v. 4-space as domain and
- vi. 4-space as origin
- 27.Further the Discipline of VMS & T of 4-space also deserve to be chased in reference to (i) spatial dimensional order of 4-space (ii) solid boundary of 4-space (iii) hyper solid 4 domain (iv) creative (4-space) origin
- 28. This chase, ultimately shall be leading us to the organization of hyper cubes as manifestation folds together as of range H1, H2, H3, H4, H5, H6 and H7 getting organized as and along 4 x 4 format as under:

| H_1 | H ₂ | H_3 | H_4 |
|----------------|----------------|----------------|-------|
| H_2 | H ₃ | H_4 | H_5 |
| H ₃ | H_4 | H_5 | H_6 |
| H_4 | H_5 | H ₆ | H_7 |

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Lesson - 4

4-space content

- 1. First element namely 'Earth' is of the format and features of linear order 3-space matter.
- 2. The second element namely 'Water' is of the format and features of spatial order 4-space content.
- 3. The transition from the format and features of 3-space matter to 4-space content is to be of attainment from the transition from 'Earth' to 'Water'.
- 4. This transition, in a way is going to be of the features and values from that of 'linear order' to that of 'spatial order'.
- 5. Along artifices of numbers, it would be a transition of values and virtues of artifices '1' to artifice '2'.
- 6. This in a way would be of the format and features of transition from value '1' to value of range steps '1, 2'.
- 7. Parallel to it would be the transition format of features from the set up of single axis to the set up of a pair of axes
- 8. Here it would be relevant to note that amongst the pair of axes, the second axis presumes the existence of first axis.
- 9. One may have a pause here and have a fresh look upon these features and it shall be bringing to focus as if single axis set up of Earth getting merged into a pair of axes set up of Water.
- 10. That way, the transition from '1' to '1, 2' would be bringing us face to face with features of 1 = 1 and 2 = 2, as well as 2 = 1 + 1.
- 11. This in a way the transition from '1' to '2' would be of sequential steps reach being of values 2^0 , 2^1 .
- 12.One shall have a pause here and have a fresh look at the pair of sequential steps namely (i) (1, 2) and (ii) $(2^0, 2^1)$.
- 13. This pair of sequential steps shall be leading to a pair of sequences:
 - (i) 1, 2, 3, 4, 5, 6, --- and
 - (ii) $2^0, 2^1, 2^2, 2^3, 2^4, 2^5, \dots$
- 14. Further here, it also would be relevant to note that the sequential steps sequence [(1), (1, 2), (1, 2, 3), (1,2, 3, 4), ---] shall also be leading us to values sequence (i) 1, 1+2, 1+2+3, 1+2+3+4, -- which is parallel to values sequence (1, 3, 6, 10, ---) of synthesis values of linear dimensions, viz. [(1), (1, 1)=3, (1, 1, 1) = 6, (1, 1, 1, 1) =10, ---]
- 15.Here It would be relevant to note that the synthesis values sequence of spatial dimensions comes to be [(2)=2, (2, 2)=4, (2, 2, 2)=6, (2, 2, 2, 2)=8, ---].
- 16. This pair of values sequences of linear and spatial dimension respectively, namely
 - (i) (1, 3, 6, 10, ---) of linear dimensions synthesis values sequence, and

(ii) (2, 4, 6, 8, ----) values sequence in respect of spatial dimension synthesis;

Shall be indicative of the distinguishing features of 3-space content vis-à-vis 4-space content.

- 17. The other reach for distinguishing features of 3-space content and 4-space content can be inferred and comprehended from three dimensional frame and four dimensional frame respectively.
- 18. Three dimensional frame is a set up of three linear dimensions with its origin being the seat of 4-space.
- 19. Four dimensional frame is a set up of four spatial dimensions with its origin being the seat of 5-space.
- 20.One another way to reach at a distinguishing feature of 3-space content and 4space content can be in terms of the manifestation of spatial boundary in case of hyper cube 3 and solid boundary in case of hyper cube 4.
- 21. Here it would be relevant to note that spatial boundary of hyper cube 3 is a set up of 6 surface plates format while solid boundary of hyper cube 4 is a set up of 8 solid components.
- 22.One another way to reach at distinguishing features of 3-space content from that of 4-space content would be in terms of the measuring rods accepted by 3-space domain and 4-space domain respective.
- 23.One may have a pause here and take note that measuring rod of 3-space (domain) is a synthetic set up of hyper cube 1, 2 and 3 while the measuring rod of 4-space (domain) is the synthetic set up of hyper cubes 1, 2, 3 and 4.
- 24.One another way to reach at the distinguishing features of 3-space content manifesting as 3-space domain of hyper cube 3 and 4-space content manifesting as 4-space domain of hyper cube 4 would be to have comparative comprehension of the different roles of 3-space (content) vis-à-vis 4-space content as dimension fold of hyper cube 5 and hyper cube 6 respectively, further as 3-space boundary of hyper cube 4 and 4-space boundary of hyper cube 5 respectively and still further as 3-space (content) as origin of hyper cube 2 and 4-space content as origin of hyper cube 3 respectively.
- 25. The seven steps long roles and inter relationship of 3-space and 4-space respectively with other spaces shall be providing a comprehensive view of the distinguishing features of 3-space content from that of 4-space content.
- 26.Seventh steps long range of roles and relationships of 3-space with other spaces comes to be:
 - (i) (1, 3) / (1-space as dimension, 3-space as domain).
 - (ii) (2, 3) / (2-space as boundary, 3-space as domain)
 - (iii) (3, 3) / (cube within cube)/ synthesis values of pair of solid dimensions is 5 / transcendental (5-space) domain set up.
 - (iv) (3, 4) / (3-space as domain, 4-space as origin)
 - (v) (3, 5) / (3-space as dimension, 5-space as domain) / 3-space as domain, 5-space as base.
 - (vi) (3, 6) / (3-space as dimension, 6-space as origin) / 3-space as domain, 6space as format

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- (vii) (3, 7) / (3-space as domain, 7-space as unity state) / 3-space being a set up of 7 geometries range / hyper cube 3 as 7 versions
- 27. Likewise Seventh steps long range of roles and relationships of 4-space with other spaces comes to be:
 - (viii) (1, 4) / (1-space as dimension, 4-space as origin).
 - (ix) (2, 4) / (2-space as dimension, 4-space as domain)
 - (x) (3, 4) / (3-space as boundary, 4-space as domain)
 - (xi) (4, 4) / (hyper cube 4 within hyper cube 4)
 - (xii) (4, 5) / (4-space as domain, 5-space as origin)
 - (xiii) (4, 6) / (4-space as dimension, 6-space as domain)
 - (xiv) (4, 7)/(4-space as dimension, 7-space as origin)
- 28.Origin of three dimensional frame as a seat of 4-space deserve to be comprehended well and its features to be appreciated fully and to be imbibed completely for full insight about the distinguishing features of 3-space content and 4-space content.

10-01-2015

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