

Sri – Om
VEDIC MATHEMATICS AWARENESS YEAR

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For previous issues and further more information visit at www.vedicganita.org

'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.

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ISSUE NO 69

	Page
Transcendental (5-space) domains	01-03
Contents	04-05
Lesson 05	
Nine points fixation of a cube	06-10

Vedic mathematics, Science & Technology
UNIVERSITY CONCEPT

I

OPENING STATEMENT

[(Source Theme) **To chase parallel to jyoti flow within rays of the Sun]**

II

EMERGENCE AND DISSOLUTION OF TRILOKI (3, 4, 5, 6)

(Source Theme) **Triloki is of transcendental (5-space) state within Jyoti**

III

Existence within Human Frame

(Source Theme) **Pursha, Sun, Atman, Vishnu are of parallel formats**

IV

Sankhiya Nishtha and Yoga Nishtha

(Source Theme) **Parallel are the formats of artifices of numbers and Dimensional frames**

V

Interlinking of classical alphabets with Sanskrit alphabet

(Source Theme) **Sunlight base of Devnagri alphabet**

VI Divine Song: Srimad Bhagwad Geeta
(Source Theme) **Essence is 'Essence of Essence'**

VII Challenge of re-construction of all the branches of Vedas
(Source Theme) **Sakala Rigved Samhita is the source scripture**

VIII Riks (रिक्), Yajurs (यर्जु), Samas (साम) and Atharavs (अथर्व)
(Source Theme) **One unfolds many folds**

IX Creator's space (4-space)
(Source Theme) **Lord Brahma four head lord is in the Creator the Supreme**

X Transcendental (5-space) domains
(Source Theme) **Ultimate Existence Base**

1. Vedic Systems settle transcendental (5-space) domains as the ultimate Existence base for manifested creations.
2. Manifested creations accept dimensional frames.
3. Manifested creations remain enveloped within another manifested layers.
4. Manifested creations are also having transcendental (5-space) origins.
5. It is by transcendence through the origin fold that there is a reach at transcendental (5-space) base of Existence within frames.
6. The transcendental (5-space) base as well accepts manifestation formats.
7. It is this feature of the transcendental (5-space) base of Existence Phenomenon which deserve to be comprehended well for its full appreciation and complete imbibing to acquire through insight about it.
8. The manifestation format of transcendental (5-space) base is of solid order (3-space in the role of dimension).
9. However, as a base of spatial space (4-space) domain, it works in terms of half dimensions.
10. It is this feature of transcendental (5-space) base available for sustenance of manifestation creations in half dimensions frame, which deserve to be comprehended consciously.

11. The split of dimensional frames into a pair of dimensional frames of half dimensions, is the feature which is chased with precise details by the Vedic Systems.
12. It is a very delicate aspect.
13. It deserves to be chased very gently.
14. Transcendental (5-space) domains have unique feature as that here transcendence takes firstly from domain fold (5-space) to dimension fold (3-space), and at the next step it takes from solid dimension (3-space as dimension) to dimension of dimension which is a linear order (1-space),
15. With it the dimensional order of transcendental (5-space) domains comes to be of value $1 \times 3 \times 5$ and its split into a pair of dimensional frames amounts to split of artifice 17 as artifices pair $(7 \frac{1}{2}, 7 \frac{1}{2})$
16. It is this feature which makes transcendental (5-space) domains to be unique.
17. It is this uniqueness of the transcendental (5-space) domain which deserves to be comprehended well.
18. Parallel to it is the split of transcendental (5-space) domain into northern hemisphere and southern hemisphere set ups
19. Emergence of sky within space is of format of this feature of transcendental (5-space) domain.
20. Dimensional frame of transcendental (5-space) domain is a set up of five solid dimensions, which is a set up of 10 half solid dimensions, parallel to the set up of ten prisms being the contribution of a pair of prisms by each solid dimensions of the format of a cube permitting split into a pair of prisms.
21. Here it would be relevant to note that each prism, as such is a set up of five surface plates, nine edges and six corner points and one volume and thereby there being a set up of $5 + 9 + 6 + 1 = 20$ components which is parallel to TCV (वेद) = 20 = TCV (देव).

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VMS & T Project
School Text Books
(Class IX, X, XI & XII)

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VMS & T Text Book Class IX
(3-space)

Contents

1. Text book of class IX (3-space) VMS & T is going to be of two parts, for first semester and for second semester instructions.
2. The first semester instructions spread over the range of following six lessons.
 1. Chapter 1 Cube
 2. Chapter 2 Geometric envelope of cube
 3. Chapter 3 Seven versions of cube
 4. Chapter 4 Eight Octants cut of 3-space
 5. Chapter 5 Nine point fixation of cube
 6. Chapter 6 Ten directional frame for 3-space.
3. Second semester also has a coverage range of six lessons (lesson 7 to 12) namely :
 7. Chapter 7 Hyper cube 3 format
 8. Chapter 8 Zero signature geometry format as the starting point for Ganita Sutras format
 9. Chapter 9 Three place value system
 10. Chapter 10 Different roles of 3-space
 11. Chapter 11 Cube and Sphere
 12. Chapter 12 Triloki and Trimurti
4. General chaise steps of lesson are going to be :
 - i. Concept and theme of the lesson
 - ii. Technical terms
 - iii. Overview of information
 - iv. Main lesson
 - v. Objective type questions and answers
 - vi. Small answer questions
 - vii. Conceptual exercises
 - viii. Table of figures
 - ix. The steps to reach at the text of lessons

The broad outline of the steps to reach at the text of the lessons is going to be as under

- i. First of all to draw the broad outline of the lesson as is under progress at present.
- ii. At second stage, attempt would be made to settle the contents coverage.
- iii. At third stage, text would be reached at for inviting comments before its finalization.
- iv. Finalization of the text.

Uptill this stage the outline of the first four lessons has been drawn in previous four issues of this E-newspaper (issues no 65, 66, 67 & 68). However at that stage, the different features of the text of lessons has not reflected but from on the stage of lesson 5 'nine points fixation of cube', the referred features as well are being dotted, to be elaborated further, at next stages of visit to the settlement of the Text.

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VMS & T Project
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VMS & T Text Book Class IX
(3-space)

Lesson - 05

Nine points fixation of a cube (☐)

I

Conceptual theme

1. Aim is to approach the set up of 'cube (☐)', in its fixed stage.
2. Fixed states means, a state in which the structural set up of the body (here cube) remains integrated whole as wholesome unit.

II

Technical terms

3. Technical terms here are about the different components of the set up of the cube.
4. It would be a blissful exercise to tabulate these terms appearing in the text of the lesson.
5. Further, it also would be a blissful exercise to include these terms in Dictionary being attempted by the readers.
6. The conceptual base and other features of these terms as well to be included in the explanatory notes in the Dictionary beneath these entries of the dictionary.

III

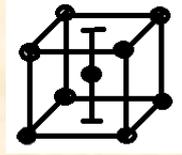
Overview of the information

7. Overview of the information surfacing in the text of the lessons as well be drawn as an exercise of evaluation of the one's own comprehension of the lesson and appreciation of the emerging values of the lesson.
8. This overview is not only a summary of the lesson but it also is a projection of its inter-relationship with the previous lessons as well as about what is to follow the present lesson.
9. As such reaching at overview of the information of the lesson would be a complete index of understanding and imbibing of the values of the lesson and of insight of the virtues of the values learnt while being through the lesson.

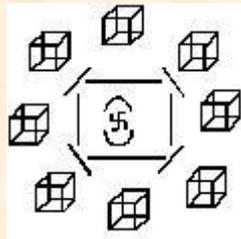
IV

Main lesson – 5

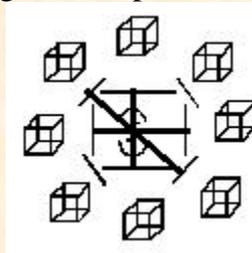
Nine points fixation of cube (☑)



10. Let us have a fresh look at the set up of cube (☑).
11. It permits its fixation of in terms of eight corner points and ninth centre.
12. Middle points of 12 edges together with centres of 6 surface plates of cube make out 18 points which along with above 9 point (8 corner points and 1 centre) make out a set up of 27 points parallel to 27 components set-up of cube, namely, 8 corner points, 12 edges, 6 surfaces and 1 volume of cube.
13. This set up of 27 points also goes parallel to 9 three dimensional frames areas ($9 \times 3 = 27$ in number), 8 of which are embedded in 8 corner points of cube and ninth three dimensional frame being fixed in centre of cube.
14. This set of 9 three dimensional frames, themselves have their fixation in their respective origins (4-space seats).
15. One may have a pause here and take note that hyper cube 4 accepts 9 versions.
16. It would further be relevant to note that hyper cube 4 has solid boundary of 8 components.



17. Still further, it would be blissful to note that 4-space is a spatial order space (2-space plays role of dimension and 4 spatial dimensions constitute its dimensional frame and 5-space, which is of solid order (3-space in role of dimension) plays as role of origin of 4-space.



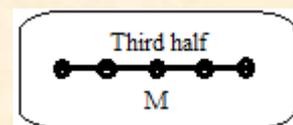
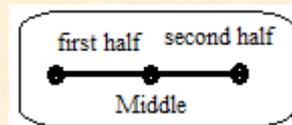
18. The spatial order (2-space as dimension) leads to spatial measures (2 as 1 and 1 as 2).
19. It is this feature which deserve to be comprehended well and to be appreciated completely for its full imbibing to have through insight about it.
20. The 8 solid boundary components of 4-space are of linear order. It, as such, would help us appreciate as that $8 = 2^3 = 2 \times 2 \times 2$.

21. And further in each corner point of cube is imbedded a three dimensional frame of half dimensions.
22. Then at center of hyper cube 4 is a synthesis of a pair of three dimensional frames of half dimensions as a three dimensional frame of half dimension.
23. Let us again have a pause and view cube (⊠) as a set up of placement of 8 corner points at centers of 8 sub cubes of bigger cube synthesized by those 8 sub cubes.
24. Let us revisit the above set up.
25. Let us chase it gently in a sequential steps.
26. Let us take a cube, to be designated as a given cube (⊠) (in short G.C)
27. GC is having eight corner points to be named as GCC 1, 2, 3, 4, 5, 6, 7, 8.
28. Now let us have another synthesized cube (SC of eight sub cubes (SCC 1, 2, 3, 4, 5, 6, 7, 8).
29. Let us have a pause here and chase placement of eight corner points GC 1, 2, 3, 4, 5, 6, 7, 8 upon the centers of eight cube cubes of synthesized cube.
30. Let us draw following tabulation for comprehensive view of above placements.

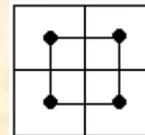
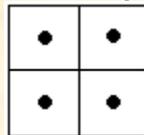
Sn.	Corner of GC	Center of Sub cube of SC
1	GCC 1	Center of SC.SC - 1
2	GCC 2	SC.SC - 2
3	GCC 3	SC.SC - 3
4	GCC 4	SC.SC - 4
5	GCC 5	SC.SC - 5
6	GCC 6	SC.SC - 6
7	GCC 7	SC.SC - 7
8	GCC 8	SC.SC - 8

31. Let us again have a pause and have a fresh look at the above set up.
32. It would be bringing to focus that with given cube (GC) is associated a synthetic cube SC.
33. Further it also comes to notice that the given cube, with its unique placements makes the given cube of the format and features of sub cube of synthetic cube itself.
34. Given cube becomes of the format and features of an octant / one of the eight sub cubes set up of the cube.
35. The given cube, in the circumstances, is the ninth sub cube of octant format.
36. This 9th sub cube, that way firmly integrates and fixes the synthetic setup of the synthetic cube.
37. This as such would help us comprehend and to appreciate that while the 'given cube', would be in a motion in this space, along with it would be in motion that way the synthetic cube as well would remain in integrated state even while being in a dynamic state.
38. It is this feature of 9 point fixation, which deserves to be comprehended well for its thorough appreciation and full imbibing to have complete insight about this feature of the set up of the cube.

39. In the context, one may revisit the set up of the square permitting split into four quarters squares and fifth quarter square having placement of its corner points at the centers of the four quarters of the square.
40. A step ahead, the split of an interval into a pair of halves shall be leading to a third half with its end points at the middle points at the pair of halves of the original interval.
41. A recapitulation as that the pair of halves of an interval stand integrated in terms of third half with end points at middles of the pair of halves of the interval.



42. And further four quarters of square are integrated in terms of fifth quarter square with its four corner points having placement at the centers of the four quarters of the square. And still ahead, eight octants of 3-space / eight sub cube of cube remain integrated in terms of 9^{th} sub cubes with its corner points having placement at the centers of eight sub cubes of the main cube.



43. These artifices triples (3, 5, 9), a step ahead shall be leading us to artifice 17 and thereby making a quadruple artifices set up (3, 5, 9, 17) in reference to quadruple artifices (2, 4, 8, 16).
44. One may have a pause here and take note that $(5-3) = 2$, $(9-5) = 4$ and $17-9=8$.
45. The artifices triple (2, 4, 8) permit re-organization as $2^1, 2^2, 2^3$.
46. One may further have a pause here and take note that number 1 as range 1 has only 1 arrangement for value 1, namely $1 = 1$.
47. The number 2 as range (1, 2) has a pair of arrangements for value 2 as (i) $2 = 2$ and (ii) $2 = 1 + 1$.
48. A step ahead number 3 has four arrangements for value 3, namely (i) $3 = 3$ (ii) $3 = 1 + 2$ (iii) $3 = 2 + 1$ and (iv) $3 = 1 + 1 + 1$.
49. A step further ahead number 4 as range (1, 2, 3, 4) has eight arrangements of value 4, namely (i) $4 = 4$ (ii) $4 = 1 + 3$ (iii) $4 = 3 + 1$ (iv) $4 = 2 + 2$ (v) $4 = 1 + 1 + 2$ (vi) $4 = 1 + 2 + 1$ (vii) $4 = 2 + 1 + 1$ (viii) $4 = 1 + 1 + 1 + 1$.
50. One may have a pause here and revisit the set ups of interval, square, cube and hyper cube 4 on the one hand and numbers 1, 2, 3 and 4 on the other hand and to glimpse the parallel formats and features of artifices of numbers and format of dimensional bodies.

V

Objective type questions and answers

51. In the light of above text of lesson, we can enlist objective type questions with answers.

VI
Small answer questions

52. Further in the light of the text, we can enlist small answers requirement to questions.

VII
Conceptual exercises

53. Also conceptual exercises can be coined for proper evaluation of the comprehension of the lesson.

VIII
Table of figures

54. Also table of figures may be drawn to facilitate the conceptual comprehensions of the lesson.

IX
The steps to reach at the text of lessons

55. Present stage is the first stage in which broader outline of the lesson has been drawn.

56. In next phases, attempt would be made to settle and finalize the text.

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