

**Vedic Mathematics, Science & Technology
Teacher Course**

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9TH SUB CUBE, 65TH SUB-SUB CUBE

This day the course focus is upon '9th sub cube, 65th sub-sub cube'. It four folds aspects being taken up are as follows:

25. Ninth sub cube, sixty-fifth sub-sub cube, ...
26. Right angle triangle (3, 4, 5, 6).
27. Perfect numbers (6, 28, 496, 8128).
28. Difference values sequence of linear and spatial dimensional synthesis values.

The values being covered are to be taught as lessons numbers 25 to 28 to the students of 3-space Vedic Mathematics, Science & Technology.

LESSON-25

**NINTH SUB CUBE AND
SIXTY-FIFTH SUB-SUB CUBE**

1. Cube splits into 8 sub cubes.
2. Each sub cube further split into 8 sub-sub cubes.
3. Of these $8 \times 8 = 64$ sub-sub cubes of 8 sub cubes of cube lead to a class of 8 sub-sub cubes as the inner most sub-sub cubes of the sub cubes.
4. Of this class of 8 sub cubes, only one sub-sub cubes of this class belongs to a distinct sub cube.

5. The volume of each sub cube is equal to $1/8^{\text{th}}$ of the volume of the cube.
6. Volume of each sub-sub cube is $1/8^{\text{th}}$ of the volume of the sub cube.
7. As such, the volume of each sub-sub cubes is $1/64^{\text{th}}$ of the volume of the cube.
8. As such, the volume of 8 sub-sub cube is equal to $8/64^{\text{th}}$ part of volume of the cube.
9. One may have a pause here and take note that the volume of 8 inner most sub-sub cube is equal to $1/8^{\text{th}}$ of the volume of the cube, and as such it is equal to the volume of sub cube.
10. One may have a pause here and take note that it is this feature of inner most 8 sub-sub cube beings of volume equal to the volume of sub cube, which makes these 8 inner most sub-sub cubes, together as the 9^{th} sub cube.
11. Likewise, 64 sub-sub cubes lead to $64 \times 8 = 512$ sub-sub-cubes.
12. Of these, 512 sub-sub-sub cubes, the inner most eight sub-sub cubes, together make a volume equal to the volume of one sub-sub cubes.
13. This feature of inner most eight sub-sub cubes together being of volume equal to the volume of one sub-sub cubes, which makes these innermost 8 sub-sub cubes being the 65^{th} sub-sub cubes of the cube.
14. One may have a pause here and that taking this feature, the structural set up of cube will bring us face to face with the emerging value being $65 \times 8 = 520$.
15. One may have a pause here and take note that the text of 16 Ganita Sutras and 13 Ganita Upsutras together make a text of 519 letters which together with the sole syllable Om as the source syllable makes the total text of Ganita

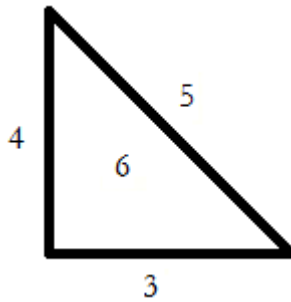
Sutra and upsutras being of 520 letters parallel to the range of sub-sub-sub cubes of 65 sub-sub cubes of cube.

16. It would further be blissful to take note that the text of Shakla Rig Ved Samhita being a scripture 8 Ashtaks and 64 chapters, and the basis base mathematics text of Ganita Sutra and upsutras being of the range of 520 letters parallel to the range of sub-sub-sub cubes of 65 sub-sub cubes of the cube.



LESSON-26

RIGHT ANGLE TRIANGLE (3, 4, 5, 6)



1. Triangle is printout of solid order (3-space in the role of dimension of 5-space) set up.
2. Right angle triangle (3, 4, 5, 6) is the print out of hyper cube 5, the representative regular body of 5-space of solid order within creative space of spatial order (2-space in the role of dimension of 4-space).
3. The right angle triangle (3, 4, 5, 6) is of sides of 3, 4 and 5 unit respectively, and of area of 6 area units.

4. This is a unique set up as that the sides and area unit are of consecutive quadruple whole numbers values.
5. It is this feature of this right angle triangle which deserves to be comprehended well for its through appreciation and complete imbibing, as it is this comprehension, appreciation and imbibing, that it shall be acquiring proper insight and appropriate enlightenment of the systems of Vedic mathematics, science and technology of solid dimensional order (3-space in the role of dimension of 5-space).
6. The right angle triangle (3, 4, 5, 6) deserves to be chased for each of its quadruple components.
7. Number value 3, 3-space and solid dimensional order deserves to be approached simultaneously.
8. Number value 4, 4-space and creative boundary (4-space in the role of boundary) deserves to be chased simultaneously.
9. Number value 5, 5-space and transcendental domain (5-space domain) deserves to be chased simultaneously.
10. Number value 6, 6-space and self referral origin (6-space in the role of origin) deserves to be chased simultaneously.
11. It would be relevant to take note that value pair (3, 5) are of the format of 3-space in the role of dimension of 5-space.
12. Likewise, values pair (4, 6) is of the format of 4-space in the role of dimension of 6-space.
13. It would further be blissful to take note that $3 \times 5 = 15$ and $4 \times 6 = 24$ are parallel to the dimensional frames values of 5-space and 6-space respectively.
14. Further as that, the values pair (15, 24) as end values, cover values range 16 to 23 and values 16 is parallel to

transcendental code value of formulation *ligam* and number value 23 is parallel to transcendental code value of formulation *murti*.

15. It would be blissful to take note that the transcendental Lord Shiv, is the over lord of 5-space and Lord Shiv is the only lord who permits worship in the forms of *lig* and *murti*.
16. It would further be blissful to take note that value quadruple (3, 4, 5, 6), has outer covering as a value pair 3, 6 of summation value 9 and product value 18.
17. The inner cover of this quadruples value is (4, 5) with summation value $4+5 = 9$ and product value $4 \times 5 = 20$.
18. It would be blissful to take note that the values pair 18, 20 is of the format of 18 as dimension and 20 as domain and further as that $18 = 9+9$ leads to and brings us face to face with the permissible split for the dimensional frame.



LESSON 27

PERFECT NUMBERS (6, 28, 496, 8128)

1. Perfect number
Perfect number is defined as that the natural number which is equal to the sum of all of its proper divisors.
2. Perfect number 6
 - (i) Number value 6 accepts re-organization as $6 = 1+2+3 = 1 \times 2 \times 3$.
 - (ii) This feature of number value 6 makes it a unique as here in this case the sum and product of its all proper divisor (1, 2, 3) is equal.

- (iii) The feature, that $6 = 1+2+3$ makes it a perfect number and the feature $6 = 1+2+3 = 1 \times 2 \times 3$ makes it a unique perfect number.
 - (iv) This organization of number value 6 brings to focus it has three proper divisions and number value 3 is the biggest prime proper divisor of 6.
3. Perfect number 28
- (i) Number value 28 as five proper divisors namely (1, 2, 4, 7, 28).
 - (ii) $28 = 1+2+4+7+14$ makes number value 28 a perfect number
 - (iii) The features of number value 28 are that it accepts 5 proper divisors and number value 7 is the biggest prime proper divisor.
4. Perfect number 496
- (i) Number value 496 accepts 9 proper divisors namely (1, 2, 4, 8, 16, 31, 62, 124, 248).
 - (ii) $496 = 1+2+4+8+16+31+62+124+248$ and this feature makes number value 496 a perfect number.
 - (iii) The features of 496 as a perfect number are that it has 9 proper divisors and 31 is the biggest prime proper divisor.
5. Perfect number triple (6, 28, 496)
- Feature of perfect number triple brings us face to face with the interrelationship of these numbers values as follows:
- (i) Number of proper divisor of triple is (3, 5, 9), which brings us face to face with the following features:
 - (a) The values triple (3, 5, 9) brings us within the range of 9 numerals of ten place value system.

- (b) Further as that, number value 5 is of the middle placement of numeral range 1 to 9 of 10 place value systems.
- (c) Number value 3 is of the middle placement of 5 numeral range of 6 place value system.
- (ii) The biggest prime proper divisor triple (3, 7, 31) brings us face to face with the following feature:
 - (a) Number value 3 is parallel to 3-space (body) / cube.
 - (b) Number value 7 is parallel to 7 versions of cube.
 - (c) Number value 31 is parallel to 31 structural components of cube.



LESSON 28

DIFFERENCE VALUES SEQUENCE OF LINEAR AND SPATIAL DIMENSIONAL SYNTHESIS VALUES

1. Synthesis values of single, double, triple, quadruple and higher number of linear dimensions comes to be (1, 3, 6, 10, 15, ---).
2. Synthesis values of single, double, triple, quadruple and higher number of spatial dimensions comes to be (2, 4, 6, 8, 10, 12, ---).
3. Values differences sequence of above pair of synthesis sequences comes to be (-1, -1, 0, 2, 5, 9, 14, --).
4. One may have a pause here and take note that the above values differences sequence (-1, -1, 0, 2, 5, 9, 14, --) is a sequence of difference values of its consecutive values entities being (0, 1, 2, 3, 4, 5, 6, 6).

5. This feature deserves to be comprehend well for its through appreciation and complete imbibing, as it is parallel to the set of non negative whole number.
6. For the present, it be taken that this value sequence is responsible for the values difference between any pair of sequences of consecutive order dimension synthesis remaining constant as is the feature in respect of dimensions of linear order and dimensions of spatial orders reached at above.

