

Sri – Om
VEDIC MATHEMATICS AWARENESS YEAR

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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.

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श्री ॐ Sri-Om

VEDAS ARE WRITTEN ON RAYS OF SUN
Let us learn to read it

I

Shakala Rigved Samhita

Existence Phenomenon of our solar universe

1. Existence Phenomenon of our solar universe is being sustained in terms of rays of the Sun.
2. Rays of the Sun are fountained by unity state (of 7-space format of pole star as origin of solar universe) origin of Sun.
3. Unity state (7-space format) being of a transcendental (5-space) order, as such a pair of rays simultaneously emanate from origin of Sun and get fountained with transcendental (5-space) format
4. Pair of rays of Sun (synthesizing unity state) and the unity state splitting into a pair of rays is the first feature which deserve to be comprehended well and to be appreciated thoroughly for its complete imbibing to acquire full insight about this Phenomenon.
5. One may have a pause here and take note that transcendental (5-space) order and unity state (7-space) get coordinated as dimension fold (5-space) and domain fold (7-space).
6. The two fold features of this Phenomenon of relationship of transcendental (5-space) order and unity state (7-space) are
 - (i) $(5, 5) = 7$ i.e. a pair of transcendental (5-space dimensions synthesize unity state) domain

- (ii) $7=(5, 5)$ i.e. that unity state (7-space) domain splits into a pair of transcendental (5-space) dimensions.
7. The first feature $(5, 5) = 7$ leads to relationship $(5, 7)$ and thereby gives a reach from artifice value 5 to artifice value 7.
 8. The second feature $7 = (5, 5)$ leads to a reach $(7, 5 + 5) = 10$.
 9. One may have a pause here and take note that the '7' is the biggest prime numeral / prime of the range (1 to 10). With it the triple numbers (8, 9, 10) inherently are workable and attainable in terms of the applied values of number (7).
 10. Further it also would be relevant to note that the previous prime number for prime number 7 is the number (5). And, that way, the numbers range (1 to 10) permits attainability for the whole range in terms of the half range of numbers (1 to 5)
 11. One may further have a pause here and take note that as transcendental (5-space) order is fountained through rays of the Sun, as such it is a chase of this order in terms of which the role of rays of Sun for sustenance of Existence Phenomenon within solar universe can be learnt and to be done which precisely is the Vedas.
 12. And for this learning we have to go to the organization format of Shakala Rigved Samhita, the source scripture.
 13. Shakala Rigved Samhita शाकला ऋग्वेद संहिता is the source scripture.
 14. It is a scripture of 432000 akshras अक्षरः (syllables) range.
 15. Of these 34775 akshras अक्षरः (syllables) are unmanifest (unwritten).
 16. Written akshras अक्षरः range of 397265 akshras अक्षरः (syllables) organization are organized as 10552 richas ऋचाः of 10 mandals मंडलः, 8 austaks अष्टकः, 64 adheys अध्यायः, 85 anuwaks अनुवाकः, 10028 suktas सुक्तः and 2024 vargas वर्गः.
 17. Each of 10552 richas ऋचाः (and even each quarter of these richas) have distinct *rishi* ऋषिः, *Devta* देवता, *Chandas* छन्दसः and *Swara* स्वरः .

Transcendental (5-space) format

18. The pair of Rays of Sun with fountained transcendental (5-space) order within them shall be leading to the transcendental (5-space) format for the Devnagri alphabet format.

19. The synthesized set up of pair of Rays of the Sun with transcendental (5-space) order shall be of range of 9 steps parallel to 9 numerals range (1, 2, 3, 4, 5, 6, 7, 8, 9) with numeral 5 being of a middle placement.
20. With this, 9 steps long vowels range being parallel to the values range of 9 numerals will lead to association of values of numbers 1 to 9 respectively to first to ninth vowel, in that sequence and order.
21. The synthetic joint for the set up of the pair of rays of the Sun and the placement seat of number value 5 shall be providing a bend at this joint and thereby there would be a transition and transformation for the linear set up of range of values 1 to 9, parallel to 5 x 5 grid / matrix format of 5 rows and 5 columns for 5 varga rows of five letters each, viz:

Consonants

5 x 5 varga consonants

क ख ग घ ङ
 च छ ज झ ञ
 ट ठ ड ढ ण
 त थ द ध न
 प फ ब भ म

22. This format of 5 x 5 grids shall be leading to 4 x 4 transcendence format of transcendence at the centers of grid zones.
23. One may have a pause here and take note that 5 x 5 matrix (of set up of 25 points) organized as 5 rows and 5 columns of 5 points each, shall be leading to 4 x 4 grid zones and centers of these 16 grid zones shall be constituting 4 x 4 matrix format of 16 points of 4 rows and 4 columns of 4 points each.
24. One may further have a pause here and take note that from the initial step of synthesis of the pair of Rays of Sun fountained with transcendental (5-space) order manifesting 9 steps long range format for 9 vowels and its transition and transformation into 5 x 5 grid / matrix format for 25 varga consonants and the subsequent transcendence and reach at 4 x 4 grid zones / matrix as format for further 16 letters (4 antstha letters, 4 ushmana letters and 8 yama letters) leads to 9 + 25 + 16 letters format of Devnagri alphabet.
25. One may further have a pause here and take note that artifices triple (9, 25, 16) permits re-organization as (3², 5², 4²) and has coordination as 5²=3²+4² which structures right angle triangle of base (3), height (4) and hypotenuse (5) enclosing area of 6 units and thereby the triple (3, 4, 5)

transiting and transforming into quadruple (3, 4, 5, 6) and parallel to it the triple (9, 25, 16) transiting and transforming into (9, 16, 25, 36).

26. Here it would be relevant to note that artifices quadruple (3, 4, 5, 6) is parallel to four fold manifestation layer (3, 4, 5, 6) of hyper cube 5.

Transcendental (5-space) code values

27. The transcendental (5-space) format / hyper cube is the set up of five dimensional frame of five solid dimensions.

28. Each solid dimension structures 5-space domain value.

29. Second dimension, because of the availability of first dimension, is having a structured format because of the first dimension.

30. With it the first dimension shall be structuring the transcendence format (1, 3, 5) along the sequential range (1, 2, 3, 4, 5).

31. With availability of this format because of the first dimension, the second dimension shall be attaining a reach of five steps long range (2, 3, 4, 5, 6) for the transcendence triple (2, 4, 6) for the transcendental (5-space) domain.

32. The third dimension because of the availability of the attainments of the first pair of dimension shall be structuring a reach (3, 4, 5, 6, 7) for the transcendence triple (3, 5, 7).

33. Likewise fourth and fifth dimension shall be sequentially structuring (ranges (4, 5, 6, 7, 8) and (5, 6, 7, 8, 9) for the respective transcendence triple namely (4, 6, 8) and (5, 7, 9)

34. With this the emerging five ranges setup shall be providing transcendental (5-space) code values for 25 varga consonants as under:

5 x 5 varga consonants

Letters	क ख ग घ ङ
TCV values	1 2 3 4 5
Letters	च छ ज झ ञ
TCV values	2 3 4 5 6
Letters	ट ठ ड ढ ण
TCV values	3 4 5 6 7
Letters	त थ द ध न
TCV values	4 5 6 7 8
Letters	प फ ब भ म
TCV values	5 6 7 8 9

35. The transcendence 4 x 4 matrix for the first row (of four antstha letters) shall be attaining transcendental (5-space) code values quadruple artifices (1, 3, 5, 7).
36. The second row (of four ushmana letters) shall be attaining transcendental (5-space) code values quadruple artifices (2, 3, 6, 9).
37. The second half of transcendence matrix 4 x 4, namely the third and fourth rows of above transcendence 4 x 4 matrix, shall be transcending the 5 x 5 matrix which would amount to transcendence at the center / origin of 4-space itself and as such its shall be leading to transcendental (5-space) code values range (9, 10, 11, 12, 13, 14, 15, 16) for 8 yama letters (• ◡ ◣ ◤ : ✕ ◡ ◢).
38. One shall revisit the above emergence of transcendental code values for Devnagri alphabet letters and be face to face with its features which in its consolidated form comes to be as under:

Devnagri alphabet format

Transcendental code values format

Vowels

Letter	अ इ उ ऋ लृ ए ओ ऐ औ
TCV values	1 2 3 4 5 6 7 8 9

Consonants

5 x 5 varga consonants

Letters	क ख ग घ ङ
TCV values	1 2 3 4 5
Letters	च छ ज झ ञ
TCV values	2 3 4 5 6
Letters	ट ठ ड ढ ण
TCV values	3 4 5 6 7
Letters	त थ द ध न
TCV values	4 5 6 7 8
Letters	प फ ब भ म
TCV values	5 6 7 8 9

Other letters

Letters	य व र ल
TCV values	1 3 5 7
Letters	श ष स ह
TCV values	2 3 6 9

Letters	•	◡	◣	◢	:	×	◡	∞
TCV values	9	10	11	12	13	14	15	16

ऋषिः Rishi, Devta देवता, Chandas छन्दसः and Swara स्वरः of Richas ऋचा

39. Each Richa (ऋचा) has its ऋषिः Rishi, Devta देवता, Chandas छन्दसः and Swara स्वरः.
40. These five formulations namely (Richas ऋचा, Rishi ऋषिः, Devta देवता, Chandas छन्दसः and Swara स्वरः) have their transcendental (5-space) formats.
41. The transcendental (5-space) formats of these formulations can be reached for their features in terms of their transcendental (5-space) code values.
42. TCV (ऋचा) = 4 + 2 + 2 = 8.
43. This value 8 = 4 + 2 + 2 leads to the reach for value 8 as 4 + 2 + 2, which is parallel to a pair of spatial dimensions synthesizing value 4 which will help work out the internal organization of the formulation 'Richa'.
44. TCV (ऋषिः) = 4 + 6 + 2 = 12.
45. The value 12 = 2 + 4 + 6 as triple (2, 4, 6) is parallel to sequential synthetic values of spatial dimensions.
46. Further, the artifices triple (6, 4, 2) is parallel to the transcendence within transcendental (5-space) domain along its second dimension.
47. Still further, it also would be relevant to note that domain boundary ratio for hyper cube 6 comes to be $A^6: 12 B^5$
48. This, this way focuses upon the feature of the role of transcendental (5-space) boundary of self referral (6-space) domain.
49. TCV (देवता) = 26 = 6 + 6 + 7 + 1 + 4 + 2
50. Artifice 26 permit re-organization as 26 = 5 + 6 + 7 + 8, which is parallel to the four fold manifestation layer (5, 6, 7, 8) of unity state (7-space) / hyper cube 7.
51. TCV (छन्द) = 3 + 1 + 8 + 6 + 1 = 18 = 3 + 4 + 5 + 6.
52. The artifice values quadruple (3, 4, 5, 6) is parallel to four fold manifestation layer (3, 4, 5, 6) of hyper cube 5.
53. Here It would be relevant to note that hyper cube 5 and hyper cube 7 are coordinated and interconnected fold by fold as much as that respective folds of hyper cube 5 are in the roles of dimension while the respective fold of hyper cube 7 are in the roles of domains, as much as that these lead to four fold coordination as (3, 5), (4, 6), (5, 7) and (6, 8).

54. TCV (स्वर) = 3 + 7 + 1 + 3 + 1 = 15.
55. The artifice value 15 permits re-organization as $15 = 1 \times 3 \times 5 = 3 + 3 + 3 + 3 + 3$ which is parallel to the linear equivalence for the solid dimensional order of five dimensional frame of 5-space.
56. One may have a pause here and take note that the above quadruple formulations namely **Rishi ऋषिः**, **Devta देवता**, **Chandas छन्दसः** and **Swara स्वरः** are focusing upon different transcendental (5-space) features of the transcendental (5-space) format, as much as that Swara with value 15 parallel to dimensional value $(1 \times 3 \times 5) = 3 + 3 + 3 + 3 + 3$ gives focus upon the dimensional frame.
57. The formulation 'छन्दस' with value 18 as summation value of hyper cube 5 focuses upon 5-space domain itself permitting transcendence.
58. Further formulation 'देवता', with value 26 is parallel to the summation value of hyper cube 7 as the unity state of transcendental (5-space) dimensional order.
59. Finally the formulation 'Rishi' with value 12 parallel to transcendental (5-space) boundary of self referral (6-space) domain focuses upon the attainment and reach of the transcendental (5-space) format.

10552 Richas

60. The artifice '10552' avails five place value of ten place value system sequentially having placement for the values in terms of digits (2, 5, 5, 0, 1).
61. This as such permits split for the artifice value (10552) as of parts (i) 2 (ii) 50 (iii) 500 and (iv) 10000.
62. The sequential chase of above quadruple parts split will help us comprehend the transcendental (5-space) values and features of the settlement and organization of number of Richas being 10552.
63. First part value is '2'.
64. Artifice 2 has many features prominent amongst are $2 = 1 + 1$, 2 as 1 pair.
65. Further 2 is parallel to 2-space / square / surface / hyper cube 2, a two dimensional frame, a pair of axes, a pair of faces of surface.
66. Artifice 2 provides a synthesis value for a pair of rays of the Sun.
67. Value 2 at unit place value of ten place value system shall be making it as of features 2×10^0 .
68. Further it also shall be permitting re-organization being parallel to the value $2(5+5)^0$.

69. It also shall be permitting its organization value as $2 (5 \times 5)^0$.
70. One may have a pause here and take note that this as first step value namely $2 (5 \times 5)^0$ shall be leading us at next step being the value $2 (5 \times 5)^1 = 50$.
71. One shall have a pause here and take note that with it we have transited from the first part (value), i.e. 2 to the next part (value) i.e. 50.
72. One may further have a pause here and take note that value 50 is parallel to 15 letters alphabet (Devnagri alphabet)
73. Still further One may also have a pause here and take note that $50 = 5 \times 10$, which is parallel to 50 coordinates fixation of creative boundary (4-space as boundary) of 10 components of transcendental (5-space) domain.
74. With it the reach of 2-space parallel to artifice value 2, to surface of 2 faces of value $25 + 25$ to spatial order 4-space shall be helping us reach for the ten creative components of creative boundary of 5-space further unfolding into $10 \times 10 = 100$ creative components for whose fixation the need for coordinates would be $5 \times 10 \times 10 = 500$, which is parallel to the third component of the above split.
75. One may have a pause here and take note that artifice 4 and parallel to it 4-space of spatial order focus upon the unique features as that $2 + 2 = 2 \times 2 = (-2) \times (-2)$.
76. With it not only the addition and multiplication get super imposed but the positive and negative orientation as well simultaneously gets super imposed (with it the distinctive features $2 + 3 = 5$ and $2 \times 3 = 6 = (-2) \times (-3)$ and also absolute values for $(2 + 3)$ and of $(-2) + (-3)$ as well would get equalized. A step ahead $1 \times 2 \times 3 = 6 = 1 + 2 + 3$ and $(-1) \times (-2) \times (-3) = -6$ as well would get equalized.
77. All these features together with the fact that number '1' for value '1' has only 1 organization arrangement $1 = 1 = 2^0$. However number 2 for value 2 has a pair of organization arrangement namely $2 = 2$ and $2 = 1 + 1$ which makes organization values arrangements equal to 2^1 .
78. Still further number 3 for value 3 shall be having 4 organization arrangement values namely $3 = 3$, $3 = 1 + 2$, $3 = 2 + 1$ and $3 = 1 + 1 + 1$, which together make out total organization values $4 = 2^2$.
79. One may have a pause here and take note that the this way triple numbers (1, 2, 3) lead to internal organization values triple $(2^0, 2^1, 2^2) / 1, 2, 4$ and that way a step ahead of 10^1 and 10^2 , the next step value would be $10^4 = 10000$, which is parallel to fourth part of the split for $10552 = 10000 + 500 + 50 + 2$.

80. One may have a pause here and take note that the settlement of number of richas 10552 is as per the synthesis Mathematics of pair of rays of the Sun fountained by transcendental (5-space) order form the unity state (7-space) set up of the origin of 6-space / Sun.

432000 akshras

81. The organization of 432000 akshras as $4 \times 10^5 + 3 \times 10^4 + 2 \times 10^3$, shall be availing the format of 4 points (components) of the set up manifesting three units set up.

82. The solid order and transcendental (5-space) domain accepting creative boundary of ten components, as such shall be leading to $10 \times 10 \times 10$ along all the three axes of solid order and it shall be making out 10^3 as a working unit.

83. With it the pair of units shall be leading to 2×10^3 as the values range of the synthesized unit.

84. With it the three steps progression shall be achieving the range of syllables of value 432×10^3

85. The split of 432000 akshras as $397265 + 34735$ deserve to be chased.

86. One way to chase the number / artifice '397265' is parallel to the coordinated geometric formats of individual digits as per their sequential placements.

87. It may lead us to:

3	9	7	2	6	5
3	3×3	7	2	2×3	5
3	3×3	$2 \times 3 + 1$	2	2×3	$2 \times 2 + 1$

88. The feature $7 = 2 \times 3 + 1$ is parallel to 7 geometries of 3-space / 7 versions of cube.

89. The feature $5 = 2 \times 2 + 1$ is parallel to 5 geometries of 2-space / 5 versions of square.

90. The feature $3 \times 3 = 9$ is parallel to $(8 + 1)$ three dimensional frames embedded in 8 corner points of cube and 9^{th} embedded in center of the cube.

91. The feature $2 \times 3 = 6$ is parallel to 6 surface plates of cube. It is also parallel to six half dimensions of three dimensional frame for the center of square / origin of 2-space as seat of 3-space.

92. With it the above chase takes us to:

3	9	7	2	6	5
3	3 x 3	7	2	2 x 3	5
3	3 x 3	2 x 3 + 1	2	2 x 3	2 x 2 + 1
3-space	9 three dimensional frames	7 geometries Of 3-space	2-space	6 surface Plates / 6 half dimensions	5 geometries of 2-space

93. One shall have a pause here and take note that the first three steps parallel to values (5, 6, 2) are parallel to the formats of five geometries range of 2-space, 6 surface plates of solid origin and 2-space respectively.

94. The second set of three values (3, 9, 7) is parallel to 3-space, 9 three dimensional frames and 7 geometries range of 3-space.

95. One may have a pause here and take note that these features together lead to sequential synthetic set up of the features of 2-space and 3-space / square and cube / hyper cube 2 and hyper cube 3.

96. The number / artifice (34735) avails 5 places of ten place value system.

97. One way to chase this value may be as under:-

3	4	7	3	5
3	(2, 2)	2 x 3 + 1	(1, 1)	2 x 2 + 1

98. One may have a pause here and take note that value $5 = 2 \times 2 + 1$ is parallel to 5 geometries range of 2-space / 5 versions of hyper cube 2 / square.

99. The value 3 is parallel to the dimensional synthesis value of pair of linear dimensions.

100. The value 7 is parallel to $2 \times 3 + 1$ i.e. 7 geometries range of 3-space / 7 versions of cube / hyper cube 3.

101. Value 4 is parallel to dimensional synthesis of pair of spatial dimensions $(2, 2) = 4$.

102. The value 3 is parallel to $2 \times 1 + 1$ i.e. 3 geometries range of 1-space / interval / hyper cube 1.

103. A step ahead, value 0 shall be accepting dimensional synthesis values of pair of negative linear dimensions $(-1, -1)$.

104. One may have a pause here and take note that the above five places organization, of its own without any change in the value, transits and transforms into six steps long range.

105. Further it would be relevant to note that this six steps long range permits chase as pairs of triple steps.

106. The first step of pair of values (3, 5) has a parallel format of synthesis value of linear dimensions and five geometries range of 2-space.
107. The second step of pair of values i.e. (4, 7) is parallel to the synthesis value of pair of spatial dimensions and seven geometries range of 3-space.
108. A third step of pair of values i.e. (0, 3) is parallel to the synthetic value of pair of negatively linear dimensions and three geometries range of 1-space.
109. These three steps also can be approached, the other way round as well.
110. One may have a pause here and take note that these three steps are of sequential coordination of descending progression and ascending progression respectively.
111. This, as such, will help us comprehend as to the sequential format, features of the range of 34735 unmanifest letters.
112. It would be a blissful exercise to have a comprehensive view of manifest and unmanifest letters sub ranges of the 432000 syllables range.

First Richa

113. Of the 10552 richas, the first richa as such falls in first mandal, first austak, first adheye, first anuwak, first Sukta and first varga.
114. It is to have its own **Rishi ऋषिः, Devta देवता, Chandas छन्दसः and Swara स्वरः.**
115. With this organizational format, chase is to be of the pure and applied values of first richa, and as such, infact for every subsequent richa, right uptill the last richa, to have a complete reading of the Rigveda on the Rays of the Sun.
116. The text of first richa is:

ऋषिः । मधु-च्-छन्दः ॥ देवता । अग्निः ॥ छन्दः । अनुष्टुप् ॥
स्वरः । षड्जः ॥

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“अग्निमीले पुरोहितं यज्ञस्य देवमृत्विजम् ।
होतारं रत्नधातमम् ॥ ‘ऋ१-१-१’”

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27-01-2015, Dr. S. K. Kapoor, (Ved Ratan)

To be continued.....

Ganita Sutras objective Tests

Objective Test - 1

Information

Q. 1 What is transcendental (5-space) prefix of Ganita Sutras Text?

Hint: (ॐ), TCV (ॐ) = 16.

Q. 2 What is the end reach value suffix of Ganita Sutras and Upsutras?

Hint: (प्रणवः), TCV (प्रणवः)= 36

Q. 3 What is the total number of Ganita Sutras and Ganita Upsutras?

Hint (16 + 13)= 29

Simple Objective questions to be answered

Q 1. What is the total number of Sutras?

Q2. What is the total number of Upsutras?

Q 3. What is the total number of letters of Sutra 1?

Q 4. What is the total number of letters of Uputra 1?

Q 5. What is the name of Sutra 1?

Q 6. What is the name of Upsutra 1?

Q 7. What is the full text of Ekadhikena Sutra (एकाधिकेन पूर्वेण)?

Q8. What is the full text of Anurupyena Upsutra (आनुरूप्येण)?

Q9. What is the working rule of Sutra1?

Q10. What is the working rule of Upsutra1?

Q11. Give two illustrative applications of Sutra 1?

Q12. Give two illustrative applications of Upsutra1?

Q13. How many application of Upsutra1 are known to you?

Q14. Give illustrative application of rule of Sutra 1 read with Upsutra1?

Sutra 1 1, 1 +1, 1+1+1, ---

Sutra 1

Upsutra 1 2, 2 +2, 2+2 +2, ----

Q15. Whether Sutra 1 and Upsutra can help us constructive 'integers' and fractions?

Q16. Whether Sutra 1 can help us settle sequence of (point, lines, surfaces, solids, hyper solids)?

Q17. Whether Upsutra 1 can help us supplement Sutra 1 to transit from set up of 'line' to set up of 'surface'?

Q18. Follow (आनु) the form (रूप) as it is bound (येण) makes the text (आनुरूप्येण):
Upsutra 1: leads to geometric symmetry rule and arithmetic proportionally rule comment.

Advance Stage objective questions to be answered

Q. Mention features of :

- i. Sequential progression in as ascending order
- ii. Step by step
- iii. Linear format
- iv. Setting of 'point' along a line
- v. Track of a moving 'point'
- vi. Structured 'point'
- vii. Setting of structured 'points'
- viii. Track of a moving 'structured point'
- ix. Interval format
- x. Hyper cubes format
- xi. Sequential transcendence step by step
- xii. Sequential transcendence path
- xiii. Downward transcendence
- xiv. Upward Transcendence / Ascendance
- xv. Parallel two fold transcendence, upward & downward; upward & downward.

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