

**Sri – Om**  
**VEDIC MATHEMATICS AWARENESS YEAR**

E-Newsletter Issue no 198 dated 23-05-2015

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**VEDIC MATHEMATICS SCIENCE AND TECHNOLOGY**  
**(SELF REFERRAL DIMENSIONAL ORDER FORMAT)**

V

**SPACE WITHIN GEOMETRIC ENVELOPE OF CUBE**

1. Space within the geometric envelope of the cube manifests as 3-space domain with a seal at its center as a seat of 4-space.
2. There is a whole range of compactified spaces sealed at center of the cube.
3. This compactification unfolds itself during the transcendence process through the center of the cube.
4. This transcendence process because of 4-space seal at the center of cube (3-space domain) is of dual features designated as transcendence 'downward' and ascendance upward
5. This dual processing line as ascendance upward and transcendence downward is because of the spatial order of 4-space.

6. The upward ascendance process is of sequential upward release of dimensional orders beginning with the super imposition of spatial order of 4-space upon the linear order domain of 3-space (cube), followed by further super imposition of solid order (of 5-space) upon the spatial order of 4-space already super imposed upon linear order of 3-space (domain). And the process sequentially continuous of higher dimensional orders standing released from the center as seat of compactified origins.
7. One may have a pause here and take note that as a reverse process, the transcendence downward would be of 3-space domain as dimensional order, getting transcendence through the 4-space domain and manifesting as solid order transcendental (5-space) domain as origin of 4-space.
8. And a step ahead 4-space domain transcends through the center and transcends through 5-space domain and manifests as creative (hyper solid) four self referral domain (6-space) manifesting as a origin of transcendental (5-space) domain and the process sequentially continuous.
9. One may have a pause here and permit the transcending mind to be face to face with this two fold transcendence process of the format of a pair of parallel vertical lines format.
10. One may further have a pause here and take note that the parallel vertical lines formats is of a pair of lines of opposite orientations.
11. This way, this set of a pair of lines of opposite orientations, as such coordinates them parallel to the format of (+1) space as domain fold and (-1) space as dimension fold.
12. It as such makes the transcendence – ascendance format of hyper cube 1 format with two space playing the role of origin fold.

13. One may further have a pause here and take note that this four fold manifestation format, that way also deserve to be chased as a format for split spectrum and synthesis of dimensional orders.
14. One may have a pause here and take note that 1-space as domain with 2-space as its origin along the format of hyper cube 1 shall be leading to the dual features of dimensional orders, as much as that firstly it amounts to n-space playing the role of dimension of  $n + 2$  space. And secondly the synthesis of a pair of dimension of order n leading to the value 'n, n' = 'n + 2'.
15. One may have a pause here and take note that  $n + n = 2n = (n + 2) + (n - 2)$
16. This values equation can be  $n + n = 2 = n + 2 + n - 2$  brings to focus the role of (n- 2) value. This rule may be appreciated as a transcendence triple (n- 2, n, n +2), as much as that (n + 2) space plays the role of domain fold, n –space plays the role of dimension and (n – 2) space plays the role of dimension of dimension.
17. One may have a pause here and take note that the synthesis of pair of dimension of order n, accounts for the dimensional synthesis glue value (n – 2) parallel to the value of dimension of dimension.
18. The other way around, during the split process of a dimensional domain (n+2), emerge a pair of dimensions (n, n) and further also there is release of dimension of dimension (n-2) as well in the process.
19. One may have a pause here and permit the transcending mind to fully comprehend this process of synthesis of dimension and split of dimensional domain in reference to the role of dimension of dimension in this process.
20. One may further have a pause here and well appreciate the values of this process and to imbibe them completely.

21. One may have a pause here and take note that it is only with complete imbibing of the values of this process of split of dimensional domain and synthesis of pair of dimensions that one may acquire proper insight about it to have enlightened vision of this Phenomenon.

## VI

### **Split spectrum of 9-space domin**

22. Split of 9-space domain shall be leading us to a pair of dimension of order 7.
23. This feature may be expressed as (7-space as dimension), 7-space as dimension) = 9-space as domain
24. One may have a pause here and take note that in the process there would be a release of 5-space as dimension of dimension.
25. This feature may be expressed as artifices equation  $(7, 7) = 9 + 5$ .
26. A step ahead (7-space as domain) shall be resulting into split  $(5, 5) = 7 + 3$ .
27. One may have a pause here and take note that the pair of dimensions of order 7 i.e. 7-space as dimension, both together shall be leading to 2-pairs of transcendental (5-space) dimension and a pair of solid dimensions (3-space as dimension of dimension).
28. One may further have a pause here and beginning with single domain (9-space), as value 1 shall be leading to a pair of dimension (7-space) together as value (2).
29. However, here, there is also the availability of 5-space as dimension of dimension of 9-space.
30. Therefore there is going to be an availability of five transcendental (5-space) domains. Accordingly would get associated value 5 for this phase and stage of the spectrum of split for 9-space uptill its dimension of dimension level.

31. One may further have a pause here and take note that split spectrum of 9-space uptill its dimension of dimension level is of triple values of spectrum features as (1, 2, 5).
32. A step ahead five transcendental (5-space) domains shall be leading to split as a set of 10 solid dimension.
33. However simultaneously there also would be the availability of a pair of solid dimensions of dimension of 7-space.
34. With it at this phase and stage, there would be an availability of 12 solid dimensions.
35. With it this phase and stage permitting association of value 12.
36. As such the quadruple phases and stages of splits spectrum uptill this phase and stage shall be parallel to artifices values quadruple (1, 2, 5, 12)
37. One may further have a pause here and take note that the splits ahead for these 12 solid dimensions shall be leading to the availability of 24 linear (1-space as dimension of dimension of 5-space). As there have been five solid dimensions, as such five linear dimensions of dimensions would also be available here.
38. Accordingly the total availability would be of  $24 + 5 = 29$  linear dimensions set up.
39. With it, the values of splits spectrum uptill this phase and stage would be parallel to artifices range (1, 2, 5, 12, 29).
40. One may have a pause here and take note that it has the split ahead is to be of negative dimensional orders, as such the process up till positive dimensional orders is going to be the attainment of splits spectrum of value 29.
41. One may further have a pause here and take note that the above splits spectrum is of quadruple splits firstly from 9-space to 7-space, secondly from 7-space to 5-space, thirdly from 5-space to 3-space and fourthly from 3-space to 1 space.

42. This quadruple phases split is of sequential attainments  $2^1$ ,  $2^2$ ,  $2^3$  and  $2^4$  split spectrum features of dimensions set up up till those phases and stages of split
43. One may have a pause here and take note that the ultimate linear dimensions set up emerging as split spectrum at the end of quadruple split processes comes to be '16'
44. One may have a pause here and take note that total availability of linear dimensions at the end of the fourth phase of split has been 29, therefore  $29 = 16 + 13$ , will help us classify the spectrum in two parts, first as a set of 16 linear dimensions of straight split reach from domain folds to dimensional folds while the remaining 13 splits dimensions are there because of the emerging dimensions of dimensions at different phases and stages of split process.
45. One may have a pause here and take note that artifice 29 as value 29 of quadruple phases and stages of split of 9-space domain uptill the reach at 1-space, that way becomes the artifice of central focus.
46. Here it would be relevant to note that quadruple (26, 27, 28, 29) is parallel to the format of four fold manifestation layer of hyper cube 28.
47. One may have a pause here and take note that the geometric envelope of cube is a structural set up of 26 components (8 corner point, 12 edges, 6 surfaces
48. Further volume as one further component makes the set up of 26 components which is parallel to TCV (घनः) = 27.
49. Number 28 is the second perfect number.
50. There are 29 archiks organization of Samved samhita.
51. Chapter 5 of Srimad Bhagwad Geeta is a scripture of 29 shalokas.
52. Also the last 13<sup>th</sup> chapter of Srimad Durga Saptasati is a scripture of 29 shalokas, Ardh Shalokas and Uvacha.
53. There are 16 Ganita Sutras and 13 Ganita Upsutras.

54. One shall sit comfortably and permit the transcending mind to continuously remain in prolonged sitting of trans and to glimpse format values and features of artifice 29.

## VII

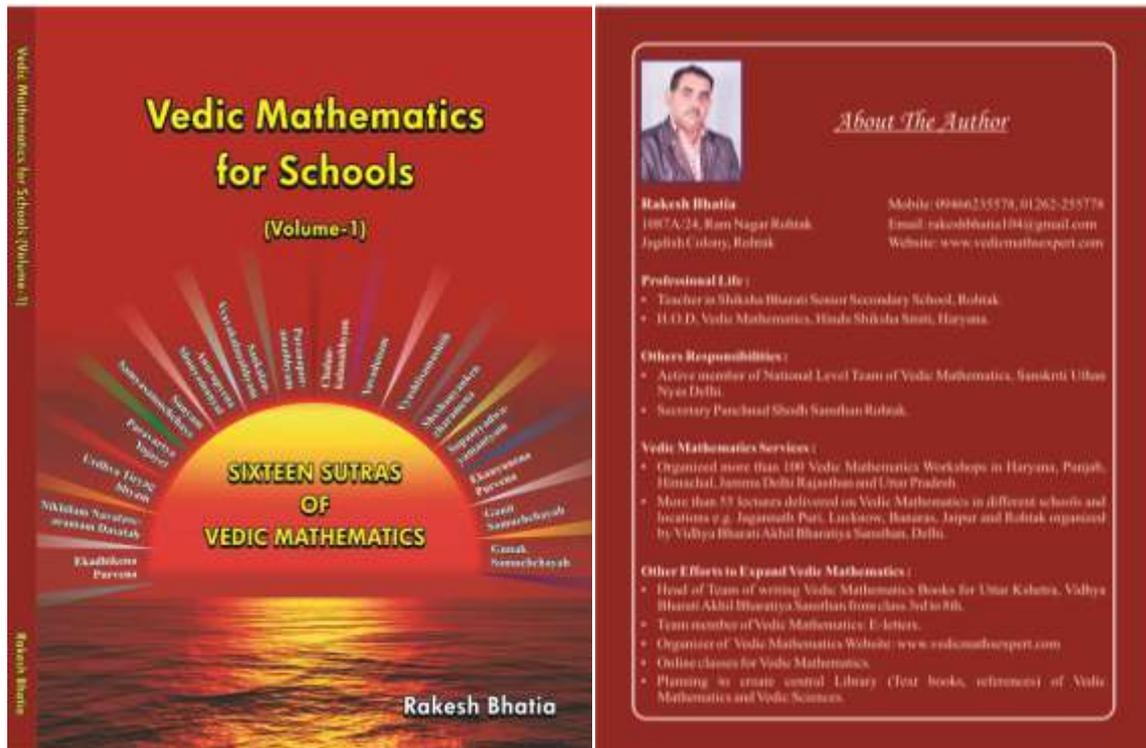
### **Sequential rule of Ganita Sutra 1 and Symmetry Rule of Ganita Upsutra – 1**

55. Sequential rule of Ganita Sutra 1 and symmetry rule of Ganita Upstura 1 may be appreciated further in the light of the quadruple phases and stages of splits spectrum of dimensional domains of values range (1, 2, 5, 12, 29).
56. It would be a blissful exercise to re-chase above values range (1, 2, 5, 12, 29) in reference to 9-space domain worked out above.
57. It would further be blissful to have a chase, now for 10-space domain.
58. It would be very blissful to see that here in this case as well sequential values range comes to be (1, 2, 5, 12, 29)
59. One may have a pause here and take note that infact above is the general range format for quadruple split steps for any dimensional domain.
60. It would further be very blissful to take note that infact the above range format is for the startwith dimensional domain say 9-space domain or 10-space domain as above or in general n-space domain, the same is infact, is in the role of dimension and thereby it is a split process for dimensional order 9 (9-space in the role of dimension) / dimensional order 10 (10-space in the role of dimension) / dimensional order n (n-space in the role of dimension).
61. Further, as the dimensional order creates manifestation for the respective dimensional domain, as such whole of the manifestation layer, as well plays the parallel role.

62. One may have a pause here and take note that order 9 creates manifestation of four fold manifestation layer (9, 10, 11, 12) of hyper cube 11, with summation value  $9 + 10 + 11 + 12 = 42$
63. Likewise order 7 and order 5 shall be creating manifestations of four fold manifestation layers (7, 8, 9, 10) and (5, 6, 7, 8) of hyper cubes 9 and 7 respectively of summation values 34 and 26 respectively.
64. Here It would be relevant to note that the summation of pair of manifestation layers of hyper cube 9 summation value would be  $34 + 34 = 68$  and as such  $42 + 26 = 68$  is of the format of hyper cube 11 manifestation layer splits into a pair of manifestation layers of hyper cube 9 with release of a manifestation layer of hyper cube 7.
65. One may have a pause here and take note that this split of hyper cube 11 format into a pair of formats of hyper cube 9 and release of the format of hyper cube 7 is parallel to 9-space domain splitting into pair of dimensions of order 7 and also there being a release of dimension of dimension of order 5.
66. It would be blissful to note that this is a general feature for whole range of manifestation layers formats of hyper cubes
67. One shall sit comfortably and permit the transcending mind to be face to face with this Phenomenon.
68. One shall comprehend this Phenomenon fully. It shall be completely appreciated, the values and features of this format of splits spectrum for manifestation layers parallel to dimensional orders shall be imbibed completely.
69. One may have a pause here and take note that it is only by complete imbibing of the format and feature of the above Phenomenon that one shall be acquiring deep insight about this Phenomenon
70. One may further have a pause here and take note that it is only by acquiring deep insight about this Phenomenon that one shall be attaining enlightened vision about it. \*

## Publication of Vedic mathematics Book by

**Sh. Rakesh Bhatia**



Sh. Rakesh Bhatia is an experienced Vedic Mathematics Teacher. He has published first volume of Vedic Mathematics for Schools. It is wonderful edition to the Vedic Mathematics Books. Mr. Bhatia has taken enough care that Vedic Mathematics topics covered in the Book to unfold sequential steps of mathematical operations in most normal way and to be parallel to the expectations of the intelligence expectations of young minds. This book also would be of great help to the parents as well to help their children to imbibe the values of Mathematics on first principles. This book is especially helpful for Mathematics teachers as it is experienced based arrangement of topics and operations and are in the expected lines of art of teaching Mathematics as a series of conceptual formats. We the organizers Vedic Mathematics Awareness Year E-newspaper congratulate Mr. Bhatia for his contribution for the cause of Vedic Mathematics. We wish him best wishes for continuing his efforts for contributing further volumes at regular intervals to cover the whole range of Vedic Mathematics for schools.

Organizer



### आर्शावचन

गोवर्धन मठ, पुरी के परम-पावन-पूजनीय शंकराचार्य श्री भारती तीर्थ जी महाराज (1884-1960) ने वेदों के सोलह गणितीय सूत्र नाम का ग्रन्थ लिखा है, यह सूत्र वैदिक गणित का आधार है। वैदिक गणित अध्यात्मिक ज्ञान है। स्वामी शंकराचार्य जी ने अर्न्तदिव्य दृष्टि तथा एकाग्रचित्ता से वैदिक गणित के सूत्रों का साक्षात्कार किया था। अर्न्तयात्रा से प्राप्त ऊर्जा से 16 सूत्रों के अविष्कार ने गणित क्षेत्र को चमत्कृत कर दिया। स्वामी जी के इस योगदान के लिये गणित प्रेमियों की ओर से शत-शत नमन।

ज्ञान और विज्ञान के क्षेत्र में भारत की यह अद्वितीय देन है। गणित की आधारभूत संकल्पनाएँ तो बहुत ही विशिष्ट हैं। शून्य की संकल्पना, संख्या लेखन की दशमिक प्रणाली एवं अंकों के स्थानीय मूल्य का स्वरूप प्राचीन भारत की ऐसी देन है, जिसके बिना गणित के क्षेत्र में कोई प्रगति सम्भव नहीं।

शून्य की संकल्पना के विषय में प्रो. जे. पी. हालस्टैड ने अपनी पुस्तक में लिखा है “भारत ने शून्य का अविष्कार कर ज्ञान-विज्ञान की उन्नति का मार्ग प्रशस्त किया है। संसार भारत का इस दृष्टि से ब्रह्णी है।” यह गणित अध्ययन क्रान्ति लाने वाला है तथा शोधा एवं विकास के लिये नवीन पथ आलोकित करता है।

श्री राकेश भाटिया वैदिक गणित क्षेत्र प्रमुख ने विद्यालयों के लिये वैदिक गणित भाग-1 का सृजन किया है। इसमें गणित सूत्रों, गणना, संख्या, 0 से आगे तक की संख्या, जोड़, घटा, वैदिक सूत्रों का अर्थ तथा व्याख्या आदि विषयों को लेकर विस्तार से परंतु सरलता से प्रथम कक्षा से पंचम कक्षा के विद्यार्थियों के लिए यह पाठ्यपुस्तक लिखी है। इस आयु के विद्यार्थियों के लिए यह अत्यंत ही उपयोगी पुस्तक है। वैदिक गणित का प्रयोग गणित की सभी शाखाओं में होता है। प्रतियोगी परीक्षाओं के शिक्षार्थियों के लिए यह उपयोगी सिद्ध हुआ है। अतः इसे व्यवसाय मानकर अनेक लोगों ने फास्ट मेथमेटिक्स (द्रुत गति का गणित)। Wonder in Mathematic (अद्भूत गणित) Mathematic without tears (रोमांचक तथा आनन्दायक) के नामों से अपना लिया है। कम्प्यूटर तथा वैदिक गणित का सम्बन्ध स्थापित होते ही Time and Space (समय व स्थान) में चमत्कारी परिवर्तन आने वाला है। श्री राकेश भाटिया ने वैदिक गणित के सम्बन्ध में कुछ विद्वानों के मत भी दिये हैं। डॉ. मदन पुरी, प्रो. आर. सी. गुप्ता, श्री जे.टी. ग्लोवर (लंदन), डॉ. माईकल आदि विद्वानों ने वैदिक गणित को श्री भारतीय कृष्णतीर्थ जी का चमत्कार बताया है और उनकी दिव्य दृष्टि के सम्मुख वह नतमस्तक हुए हैं। पुस्तक में अभ्यास के लिए प्रर्याप्त स्थान है। इस पुस्तक के अध्ययन से गणित के छात्रों की नींव सुदृढ़ होगी और वह आगे चलकर एक कुशल प्रतिभाशाली गणितज्ञ बनेंगे। इस कृति के लिए मैं श्री राकेश भाटिया को हृदय की गहराईयों से बधाई देता हूँ।

कोटि-कोटि बधाई स्वीकार करें। सुधी आचार्य तथा विद्यार्थियों की ओर से भी आभार। आपका प्रयास प्रशंसनीय है। भक्ति भाव बना रहे और आप वैदिक गणित के माध्यम से पूजा भाव में रत रहें।

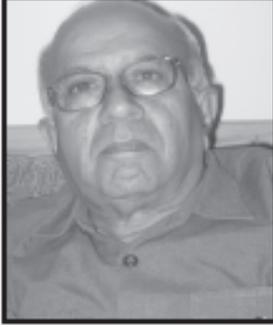
माँ के चरणों में विनीत

(दीनानाथ बत्रा) अध्यक्ष

शिक्षा संस्कृति उत्थान न्यास, दिल्ली

## PREFACE

सर्वद्रव्येषु विद्यैव द्रव्यमाहुरनुत्तमम् ।  
अहार्यत्वादनर्घ्यत्वाद्दक्षयत्वाच्च सर्वदा ॥



Among all types of wealth, the wealth of knowledge is supreme, because it can never be stolen and is at all times invaluable and imperishable.

The earliest Hindu work, which exclusively deals with astronomical calculations is vadanga Jyotisa – it appears in four reconsons; Rg, Yojur, sam and Atharva.

Atharvana – Jyotisa has fourteen sections, with 162 verses. The text clearly recognizes the significance of the science of recknowing of Kala (time). Firstly the divisions of time is given as follows:

1 ahoratra (full day) – 30 muhurtas

1 muhurta – 30 Trutis, 1 Truti – 30 Katas, 1 Kata – 30 lava's, 1 lava – 12 nimesa's

The names of weekdays stated in the text – Aditya (Sun), Some (Moon), Bhauma (Mars), Budha (Mercury), Brahaspati (Jupiter), Bhrgu (vnus) and Saniscar (Saturn). These are obviously associated with the planets and the luminaries. These point to the possibility of their Indian origin. In contrast to the modern Hindu Pancanga (Clendars only four parts – tithi (lunarday), muhurta ( parts of day) Karana ( half of tithi), and nakshatra (asterisms) – are described in this text.

### Mathematics and other sciences

Most of the discoveries of modern times would be impossible without the numeral system and the system of notation, which rank along with the wheel and the alphabet in importance of all ancient people, Indians were the most interested in transcending the empirical world of the senses. Then become the founders of algebra, which deal with non-empirical realm of mathematical formulae. The Indian mind discovered the so-called Arabic numerals, the zero and the decimal system. These discoveries gave mathematics a clear concept of abstract numbers as being distinct from numerical quantities of objects or physical extension. They become the founders of algebra, which deals with the non-empirical realm of mathematical formulae. The Indian mind discovered the so-called Arabic numerals, the zero and the decimal system. These discoveries gave mathematics a clear concept of abstract numbers as being distinct from numerical quantities of objects or physical extension. They paved the way for the wonderful innovations of algebra and astronomy.

## Knowledge of Geometry

The vedic rishis laid down certain rules for constructing open- air altars and for doing so they discovered geometry. Sulva Sutras on practical geometry was written in the 8<sup>th</sup> century B.C. or before.

**Bharti Krishan Thirtha – Shankuracharya Goverdhan Peeth Puri (Orissa)** made detailed study of Vedic Ganit and gave Sixteen Sutras & upsutras for all types of mathematical calculations. The subject is known as Vedic Ganit. The use of these sutras has made calculation work very simple, fast and accurate.

Author of this book shri Rakesh Bhatia Teacher of mathamatics at Shiksha Bharati Rohtak affiliated to Vidya Bharati Akhil Bharatya Shisha Sansthan. He is very active member of the Vedic Ganit active Parishad. He has written the book for the use of it by the teachers & students to improve their proficiency in mathematics. Every year Vidya Bharati is organizing national level quiz activity . The book will really be a bliss for the students to prepare for that quiz. Mathematics Teachers should have additional study in vedic mathematics I wish the book to be a popular one for improving expertise in mathematics.

- N.S.Rawal

Ex. General Secretary  
Vidya Bharati Akhil Bharatiya  
Shiksha Sansthan