List of VM Consolidated documents of Dr. S. K. Kapoor

List 2 Different aspects of Vedic Mathematics

Article 46
Ancient Wisdom

Present website aims to revisit Ancient Wisdom, with Vedas at its core. One of the ways which appeals is to have an approach in terms of Vedic Mathematics, with Ganita Sutras at its base. Beginning like that, reach is being aimed for Discipline of Vedic Mathematics, Science and Technology; a Discipline whose virtues, values and features transcend the individual Disciplines of Vedic Mathematics, Vedic Sciences and Vedic Technologies. This will bring us face to face with the Existence Phenomenon of solar universe of Earth to Sun range, with Pole Star as source reservoir Origin.

Sakala Rigved Samhita is the oldest source scripture of 432000 akshras range which has reached us intact from its first syllable to its 432000th syllable. As each syllable is a composition of a minimum of 2 letters, as such this range extents beyond 864000 letters range. This range may be taken as a range of 10,00,000 letters. With this, it becomes very promising range and in the claims of Ancient Wisdom, it is the full range reach for the entire Existence Phenomenon of our solar universe. And this, with this bliss is going to be our blissful revisit.

Discipline of Vedic Mathematics, Science and Technology

Discipline of Vedic Mathematics, Science and Technology (in short VMS & T) is a Discipline of distinct values, virtues and features. These values and virtues are distinct than that of Discipline of Vedic Mathematics. Also, these values and virtues are distinct than those of individual and collective Disciplines of Vedic Sciences. Further, these values and virtues of VMS & T are distinct than those of individual and collective Disciplines of Vedic Technologies.

Vedic Mathematics approach is of geometric formats. Here 'square' and 'cube' are availed simultaneously. As such, values and features of Vedic Mathematics are inherently of the virtues of this approach.

Vedic Sciences approach, individually as distinct Science Discipline, is of artifices format of 'Two'. Collectively, 'Sciences' exploration is of 'Matter'. With this, the virtues of values and features of Disciplines of Sciences, as such, are inherently the values and virtues of chase of 'matter' along artifices of 'two'.

Discipline of Vedic Technology is of the approach of simultaneously handling of a pair of paired cubes / solids. This approach of simultaneous handling of four cubes, inherently leads to values and features whose virtues become the virtues and values of the Discipline of Vedic Technologies.

The Discipline of Vedic Mathematics, Science and Technology 'VMS & T' is of the approach of directional flow paths for the dimensional contents from the center of cube / origin of 3-space.

This flow is streamed as beams bits caged by eight octants / sub cubes of cube coordinated as ten directional flow set up.

This set up manifests organization format for organization of knowledge as four fold Vedas namely, Rigved, Yajurved, Samved and Atharavved.

Transcendental carriers

Proper initiation for the Discipline of VMS & T may be in terms of transcendental carriers of Sun light. Sun in terms of its light (Sun light) unifies 'Earth to Sun range' in its both orientations. In manifested form, it is of the format of features of 'self-referral' boundary of hyper cube – 7 which has formulation value '14 A6' as domain boundary ratio of hyper cube 7 permit expression as 'B7:14A6'.

Half of self referral boundary of hyper cube 7 which is of value '7A6', as such makes Sun light as to be of the features of Self referral spectrum / rainbow of 7 colours' format of the comprehension expression range of 'pair' of eyes of 'human frame'.

The unifying features of transcendental carriers of 'Earth to Sun range' of its both orientations amounts to simultaneous availing of '2 as 1' and '1 as 2' as working units.

With it 'half' as a working unit deserves to be comprehended well. Because of it, the spatial order the set up of creator space (4-space) permits chase of the boundary fold in terms of 'half boundary fold'. This as such would permit pairing of six steps long 'Earth, Water,

Fire, Air, Space, Sun' as a range of triple pairs namely i) (Earth, Water) ii) (Fire, Air), iii) (Space, Sun)

In opposite orientation this range of triple pairs shall be organizing as i) (Sun, Space), ii) (Air, Fire) and iii) (Water, Earth)

Previous Courses available on website are:

VM Course 004:   Vedic Mathematics, Science & Technology (Course Start date: April 1, 2014). About the Course VM Course 003:   Understanding Mathematical Basic of English Language (Course Start date: March 15, 2014). About the Course VM Course 002:   Vedic Mathematics, Science & Technology Course   VM Course 001:   Organization of Ganita Sutras One may take these courses by going to 'VM courses' link.

Twelve Years Knowledge Chase Steps

Dwadash Varsh Gyan Yajna (Twelve Years Knowledge chase steps) is continuing it begin in 2006 and is to continue till 2018. Each year specific knowledge aspect is taken up for its chase. Here are being added first six years chase steps under following knowledge aspects

1. First Year: Creator's space (2006-07) 2. Second Year: Transcendental word (2007-08)

3. Third Year: Gyatri Mantra (2008-09)

4. Fourth Year: Devnagri alphabet (2009-10)

5. Fifth Year: Sunlight basis of knowledge (2010-11)

6. Sixth Year: Jeev Atma (2011-12)

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These knowledge steps can be viewed at link : *

SCRIPTURES FORMATS

Knowledge and organization of knowledge are two different aspects of pure knowledge. One of the beautiful features of Vedic scriptures is that their knowledge is organized on geometric formats of real four and higher dimensional spaces. One sequence of such formats have been communicated by Dr. S. K. Kapoor during his interaction with other scholars. Here these are being reproduced in the form and sequence these have been taken up during this interaction:

Scriptures Format 1:

OM

Om is one syllable scripture complete in itself. The past, present and future and all that transcends three folds of time is verily Om. This way the sole syllable expresses as four folds scripture complete in itself exhaustively covering the past, present and future and all that transcends the three folds of time on tetra-monad format.

Source scripture: Mandukyo Upanishad.

Scriptures Format 2:

VED

Ved means knowledge; the whole range of knowledge. This the whole range of knowledge as one Ved was reorganised by Brahm-Rishi Ved Vyas into four Veds: Rig Ved, Yajur Ved, Sam Ved and Atharv Ved. Literally Vyas means diameter of a circle (a representative regular body of 2-space which in the role of dimension manifests as 4-space.

The organization of one Ved as four Veds is parallel to the one syllable Om unfolding on tetra-monad format i.e. as an expression of four folds. With this shift to a diameter, there is a shift from a monad (linear order) to di-monad (spatial order). This gives expression for 1 as 01 whose reflection member is 10 i.e. ten.

The above shift from 1 to 10 in that order and sequence, gives us:

(1) $10+01+10 = 21$, the total number of branches of Rig Ved.

(2) $10\times10+01\times01 = 101$, the total branches of Yajur Ved

(3) $10\times10\times10 = 1000$, the total branches of Sam Ved

(4) $10–01 = 9$, the total branches of Atharv Ved

Source scriptures: Upanishads (as this knowledge is overflowing in Upanishadic literature with specific mentions at many places, as such the individual references which are large in number are being mentioned as such and they collectively are being expressed as the source scriptures being Upanishads. The other Vedic literature like Purans and Upangas also prominently enlighten about it).

Scripture Formats 3:

IDOL OF LORD BRAHMA

Lord Brahma, the creator the supreme, is the four heads Lord, with each head equipped with two eyes. He sits majestically on lotus seat of eight petals and meditates in cavity of his heart on his Lord, Lord Shiv and multiplies himself as ten Brahmas.

The idol of Lord Brahma as of four heads Lord, with two eyes in each head, sitting on lotus seat of eight petals and meditating upon his Lord, Lord Shiv, in the cavity of his heart, as such, accepts the format of hypercube-4 whose four folds are 2-space in the role of dimension (parallel to two eyes in each head), 3-space in the role of boundary (parallel to eight components of boundary of hypercube-4 and eight petals of the lotus seat of Lord Brahma), 4-space in the role of domain (parallel to the domain of four heads Lord) and 5-space in the role of origin (parallel to the seat of Lord Shiv, five heads Lord, in the cavity of the heart of Lord Brahma).

Source scriptures: Upanishads, Puranas, Yog Vashishta (This enlightenment about Lord Brahma is overflowing the large number of Vedic scriptures.)

Scripture Formats 4:

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IDOL OF LORD SHIV

Lord Brahma, the creator the supreme, is the four heads Lord, with each head equipped with two eyes. He sits majestically on lotus seat of eight petals and meditates in cavity of his heart on his Lord, Lord Shiv and multiplies himself as ten Brahmas.

The idol of Lord Brahma as of four heads Lord, with two eyes in each head, sitting on lotus seat of eight petals and meditating upon his Lord, Lord Shiv, in the cavity of his heart, as such, accepts the format of hypercube-4 whose four folds are 2-space in the role of dimension (parallel to two eyes in each head), 3-space in the role of boundary (parallel to eight components of boundary of hypercube-4 and eight petals of the lotus seat of Lord Brahma), 4-space in the role of domain (parallel to the domain of four heads Lord) and 5-space in the role of origin (parallel to the seat of Lord Shiv, five heads Lord, in the cavity of the heart of Lord Brahma).

Source scriptures: Upanishads, Puranas, Yog Vashishta (This enlightenment about Lord Brahma is overflowing the large number of Vedic scriptures.)

Scripture Formats 5:

INCARNATIONS OF LORD VISHNU

Lord Sakand is incarnation of Lord Vishnu. Lord Sakand a six heads lord with four eyes in each head and twelve long arms, is the incarnation of Lord Vishnu. Lord Sakand establishes the

transcendental worlds by meditating upon eternity, eternally sustained by Dhruva (pole star).

This description is parallel to the description of hypercube-6 with 4-space (parallel to four eyes in each head) in the role of dimension, 5-space in the role of boundary, 6-space in the role of domain and 7-space in the role of origin. The other incarnations of Lord Vishnu accepts this format.

Source scriptures: Upanishads, Puranas, Yog Vashishta (This enlightenment about Lord Shiv is overflowing the large number of Vedic scriptures.)

Scripture Formats 6:

MEASURE AND MEASURING-ROD

Lord Vishnu is the god of measuring-rod and Lord Brahma is the god of measure.

The Lord Vishnu is the overlord of real 6-space and Lord Brahma is the overlord of real 4-space.

Real 4-space plays the role of dimension of real 6-space. As such while the measuring-rod is constituted by domain (6-space), the measure remains at the dimension (4-space).

Source scripture: Manasara and other Sthapatya Upved literature.

Scripture Formats 7:

SHAD-CHAKRA FORMAT OF HUMAN BODY

Vedic (Upanishadic) enlightenment is that human body admits Shad (six) Chakras (circuits) format. The external characteristics of the ShadChakras are 2, 4, 6, 8, 10 & 12.

The external characteristics of Shad-Chakras of human body are parallel to the number of boundary components of hypercubes-1, 2, 3, 4, 5 & 6.

This format of Shad-Chakras is the format of the order of 6-space whose presiding deity is Lord Vishnu. The creator-the-supreme, Lord Brahma, overlord of real 4-space as such is the presiding deity of the measure of the human body.

Source scripture: Upanishads and Darashan Shastra

Scripture Formats 8:

ORGANIZATION OF KNOWLEDGE OF SRI VISHNU PURAN

Sri Vishnu Puran is a scripture of 6 Ansha (parts). The organization of knowledge of all the six Ansha of Sri Vishnu Puran is of 126 chapters.

This organization of knowledge is as per the measuring-rod and the Shad-Chakra format of human body as sustained within the Vishnu-lok (6-space domain)

On the artifices of whole numbers this organization admits expression as:

$6×(1+2+3+4+5+6) = 6×21 = 126.$

Source scripture: Sri Vishnu Puran Samhita

Scripture Formats 9:

VISHWA- RUPA

Shatpath Brahman preserves the enlightenment : Tawastha had one son. He had three heads and six eyes. And three mouths. So was his form (Rupa). That is why he was named - Vishwa Rupa (form of the world).

This is parallel to the world of three dimensions and domain-boundary ratio of the representative regular body of 3-space being A3:6A2. The enlightenment preserve in the Shatpath Brahman as such is the enlightenment about the geometric setup of the representative regular body of 3-space. Being a representative regular body so is the representative form of the dimensional space / world.

Source scripture: Shatpath Brahman (Kanda 1, Adhayaya 6, Brahman 3, Shaloka 1)

Scripture Formats 10:

TRISHAPTA (3 AND 7)

"Yeh Trishapta Paryani Vishwa" (This world is enveloped by Trishapata i.e. 3 and 7). Parallel to it is that 3-space has 7 geometries of signatures (0, 1, 2, 3, 4, 5, 6) corresponding to the cube with no

surface plate, cube with 1 surface plate, cube with 2, 3, 4, 5 & 6 surface plates respectively.

Source scripture:Atharv Ved Samhita (1.1.1.1)

Scripture Formats 11:

ONE, TWO, THREE AND EIGHT

Swateshawara Upanishad preserves the enlightenment that sequential order 1, 2, 3 and 8 leads to Moksha (liberation). Parallel to it is that on the artifices of whole numbers, the sequence 1, 2, 3 and 8 gives us 1×1, 1×2, 1×3 and 2×4. Parallel to it on geometric formats the message is that the order of linear dimensions works uptil first three dimensions and a step ahead is the world of spatial dimensions. In other words while 3-space admits linear dimensions, the 4-space admits spatial dimensions.

Source scripture:Swateshwara Upanishad

Scripture Formats 12:

03 TO 13

The Sushmana-Nari is the central nerve which runs through and coordinates the Shad Chakra of human body accepts the measuring-rod constituted by hypercubes-1 to 6. It means that starting with the close interval and reaching uptil hypercube-6 is the range which constitutes the measuring-rod for the Sushmana-Nari running through the Shad Chakras.

The hypercube-1 (close interval) as representative regular body of 1-space accepts three versions of interval parallel to three geometries of 1-space. The hypercube-6 as representative regular body of 6-space accepts 13 versions parallel to the 13 geometries of 6-space.

Lord Vishnu is the presiding deity of the measuring-rod being the overlord of 6-space. Srimad Bhagwad Gita is the divine song of Lord Krishna, the incarnation of Lord Vishnu. Each of the chapters of Srimad Bhagwad Gita is precisely accepting the measuring-rod with Lord Vishnu as its presiding deity and as such each chapter opens with 3 words title and ends with 13 syllables Pushapika (colophon) parallel to the three geometries of 1-space to 13 geometries of 6-space.

Source scripture:Upanishads, Ur-Mahabharatam and Srimad Bhagwad Gita

Scripture Formats 13:

120 YEARS CYCLE

The Jyotish Shastra accepts 120 years cycle for the planets' effects upon human life. This is the geometric organization of 4-space in the role of dimension creating 6-space as domain with complete coverage for the boundary of this domain with 120 hypercubes-4.

This is there as A6:12A5 is the domain-boundary ratio of hypercube-6 and further B5:10C4 is the domain-boundary ratio for each of the boundary components. With this, the 12 boundary components of hypercube-6 get enveloped within 12×10=120 hypercubes-4.

Alternatively, 4-space itself being a spatial dimensional set up, it gives us arrangement for 120 = 60+60 and further 60=2+8+18+32. It is parallel to the capacity of the orbits of an atom to retain electrons. As such, on either side of the nucleus, the set up admits expression as 2+8+18+32+32+18+8+2 = 120.

Source scripture:Jyotish Shastra and Sthapatya Upved

Scripture Formats 14:

13-EDGED CUBE IS HYPERCUBE-4

Within hypercube-4, the 12-edged cube has one degree freedom of motion along the fourth dimension. As such 12-edged cube gets fixed in 4-space as 13-edged cube. The 13th edge of the cube is supplied by the fourth dimension. Because of the spatial dimensional character of the dimension of 4-space, the 13th edge permits motions of a cube with a spatial pivot. The motion of the cube as a whole in reference to such pivot is the unique cosmic arrangements like that of pole star. The Pushpikas (colophons) beneath all the 18 chapters of Srimad Bhagwad Gita enlighten us about the 6×3=18 different ways of outward motions along all the three dimensions from all the six surfaces of the cube.

Source scripture:Scriptures with organizations of artifice of whole number 13, like the Pushpikas of Srimad Bhagwad Gita, The Ashta-Vakra Gita and Srimad Durga Saptsati which is a scripture of 13 chapters.

Scripture Formats 15:

THINGS TRANSFORM JUST WITH THE ATTENTION AT THE ORIGIN-I

Things transform just with the attention at the origin. Let us have attention at the centre of cube / origin of 3-space and everything starts transforming; the cube splits into 8 sub-cubes and 3-space splits into 8 octaves. The origin accepts 8 sub-cubes / 8 octaves enveloping. The 4-space flourishes from within at the seat of origin and everything transforms from 3-space to 4-space.

Source scripture:Ashtavakra Gita

Scripture Formats 16:

THINGS TRANSFORM JUST WITH THE ATTENTION AT THE ORIGIN-II

Things transform just with the attention at the origin. Let us have attention at the centre of hypercube-4 / origin of 4-space and everything starts transforming; the hypercube-4 / 4-space splits into 10 components. The origin accepts 10 components boundary enveloping. The 5-space flourishes from within at the seat of origin and everything transforms from 4-space to 5-space.

The scripture (Yog Vashishta) preserves the enlightenment as that Lord Brahma (the overlord of 4-space) when meditates in the cavity of his heart upon his lord, Lord Shiv, Lord Brahma multiplies himself into 10 Brahmas.

Source scripture: Ashtavakra Gita

Scripture Formats 17:

THINGS TRANSFORM JUST WITH THE ATTENTION AT THE ORIGIN-III

With just attention at the origin of 4-space / hypercube-4, the things transform into that of 5-space / hypercube-5 enveloped within ten 4-space / 10 hypercubes-5. As from spatial dimension things transform into solid dimensional order and as 3-space / cube admits split up as 8 octaves / 8 subcubes. Therefore, just with the attention at the origin we see simultaneous happening of split up into 10 components boundary and within it as within 8 components boundary. This is parallel to the simultaneous organization of Rig Ved Samhita as a scripture of 10 Mandals and also as of 8 Ashtaks. With this, with just attention, our mundane world set up of 3-space starts transforming as transcendental Vedic world of the order of Rig Ved.

Source scripture:Ashtavakra Gita, Rig Ved Samhita

Scripture Formats 18:

THINGS TRANSFORM JUST WITH THE ATTENTION AT THE ORIGIN-IV:

SIMULTANEOUS INTERNAL AND EXTERNAL EXPANSIONS

With just attention at the origin of a space, say n-space / hypercube-n, the interactive process gets initiated and there follows

simultaneous internal and external transformations and expansions to the next higher space set up.

If we just have attention at the set up of a cube, the outer surfaces, as 2×3 boundary components / surface plates, being spatial in organization, as to be set to fly off in the outer space and to dimensionalize it as 4-space. Two of the boundary components together to constitute a di-monad format and the remaining four of them to constitute four spatial dimensions for 4-space. This external transformation and expansion as dimensionalize 4-space is parallel to the internal transformation and expansion at the seat of origin a s 4-space. This way there is parallel internal and external emergence of 4-space.

Likewise, if we have attention at the set up of a hypercube-4, the outer solids, as 2×4 boundary components / solid components, being solid in organization, as to be set to fly off in the outer space and to dimensionalize it as 5-space. Three of the boundary components together to constitute

a tri-monad format and the remaining five of them to constitute five solid dimensions for 5-space. This external transformation and expansion as dimensionalize 5-space is parallel to the internal transformation and expansion at the seat of origin as 5-space. This way there is parallel internal and external emergence of 5-space.

Further, if we have attention at the set up of a hypercube-5, the outer hypersolids, as 2×5 boundary components / hypersolid components, being hypersolid in organization, as to be set to fly off

in the outer space and to dimensionalize it as 6-space. Four of the boundary components together to constitute a tetra-monad format and the remaining six of them to constitute six hypersolid dimensions for 6-space. This external transformation and expansion as dimensionalize 6-space is parallel to the internal transformation and expansion at the seat of origin as 6-space. This way there is parallel internal and external emergence of 6-space.

In general, if we have attention at the set up of a hypercube-n, the outer hypersolids, as 2×n boundary components / hypersolid components, being hypersolid in organization, as to be set to fly off in the outer space and to dimensionalize it as (n+1) space. (n–1) of the boundary components together to constitute a {(n–1)-order} monad format and the remaining n+1 of them to constitute n+1 hypersolid dimensions for (n+1) space. This external transformation and expansion as dimensionalize (n+1) space is parallel to the internal transformation and expansion at the seat of origin as (n+1) space. This way there is parallel internal and external emergence of (n+1) space.

Source scripture:Ashtavakra Gita, Sthapatya Upved literature

Scripture Formats 19:

THINGS TRANSFORM JUST WITH THE ATTENTION AT THE ORIGIN-V:

COMPACTIFICATION AT THE ORIGIN

With just attention at the origin sequentially the simultaneous inward and outward expansion would unfold the compactification of whole range of dimensional spaces at thc origin.

The attention at the origin of 3-space would initiate the interaction process of the mind and everything would start transforming and there would emerge simultaneous, inward and outward expansion of 4-space. With this, 3-space / cube as such shall be having placement at the origin and there emerging outward and inward, and as such all around, 4-space in its display. It may be expressible as 4, 3, 4. Three space at the centre and 4-space on its either side. The further attention would transform the very interactive process as much as that while on the one hand the attention would get centered at the origin of 4-space which would expand it outward as well as inward as 5-space and on the other hand the previous stage expression of 3-space at the centre and 4-space around would set into initiation for the 3-space with available degree of freedom of motion to play the role of dimension and as such there would be dimensionalization of 5-space. This simultaneous unfoldment, transformation and expansion as $\{(4, 3, 4)$ and $(4, 5, 4)\}$ and in general $\{(n, n–1, n)$ and $(n, n+1, n)\}$ is uniquely there because of the compactification at the origin of whole range of real spaces. (The spaces where n-space plays the role of dimension of n+2 space).

Source scripture:Yog Shastra and Sthapatya Upved literature

Scripture Formats 20:

THINGS TRANSFORM JUST WITH THE ATTENTION AT THE ORIGIN-VI:

CONTINUITY MAINTAINED BY BRIDGING OF GAPS

The Sushmana-Nari is the central nerve which runs through and coordinates the Shad Chakra of human body accepts the measuring-rod constituted by hypercubes-1 to 6. It means that starting with the close interval and reaching uptil hypercube-6 is the range which constitutes the measuring-rod for the Sushmana-Nari running through the Shad Chakras.

The hypercube-1 (close interval) as representative regular body of 1-space accepts three versions of interval parallel to three geometries of 1-space. The hypercube-6 as representative regular body of 6-space accepts 13 versions parallel to the 13 geometries of 6-space.

Lord Vishnu is the presiding deity of the measuring-rod being the overlord of 6-space. Srimad Bhagwad Gita is the divine song of Lord Krishna, the incarnation of Lord Vishnu. Each of the chapters of Srimad Bhagwad Gita is precisely accepting the measuring-rod with Lord Vishnu as its presiding deity and as such each chapter opens with 3 words title and ends with 13 syllables Pushapika (colophon) parallel to the three geometries of 1-space to 13 geometries of 6-space.

Source scripture:Upanishads, Ur-Mahabharatam and Srimad Bhagwad Gita

Scripture Formats 21:

VYKATA, AVYAKATA, AVYAKATO-AVAKATAT AND PURUSHA #1

Srimad Bhagwad Gita preserves the enlightenment of the order of the Reality as Vyakta, Avyakata, Avyakto, Avyakato-avyakatat and Purusha.

Vyakta means expressed. It is the expressed world, Vishwa, 3-space.

Avyakata means unexpressed which is yet to manifest in the Vishwa, 4-space world.

Avyakato-avyakatat means which is at the base of Avyakata. It is the transcendental base, a 5-space world.

Purusha is fully expressed transcendental consciousness within human frame. It is the consciousness world of Atman (soul) domain, Vishnu-lok, the Purusha in the Surya (sun), the 6-space reality.

Source scripture:Upanishads, Brahm Sutra, Srimad Bhagwad Gita

Scripture Formats 22:

VYKATA, AVYAKATA, AVYAKATO-AVAKATAT AND PURUSHA #2 :

13-EDGES CUBE WITHIN DOMAIN OF HYPERCUBE-4

http://www.vedicganita.org/Images/script3.gif

The above format gives us 8 solid components of the boundary of hypercube-4 and the 12-edged cube gets fixed along the degree of

freedom available to it within domain of hypercube-4 and as such manifest as 13-edged cube. There being a degree of freedom of motion along each of the four dimension of 4-space, as such there are 4 different ways for fixation of 13-edged cube within the domain of hypercube-4 and hence within 4-space. Otherwise as the 4-space itself is a spatial dimensional space, as such we get first format for the Great debate of enlightenment and knowledge within the kingdom of King Janak where everybody except Ashtavakra were held up at two fixations for the artifice of whole number 13 while Ashta Vakra won the debate by completing all the four fixations for the artifice of whole number 13.

Source scripture:Story of enlightenment of Ashtavakra

Scripture Formats 24:

VYKATA, AVYAKATA, AVYAKATO-AVAKATAT AND PURUSHA #4:

32 EXTERNAL GODS AND 13 INTERNAL GODS

http://www.vedicganita.org/Images/script3.gif

Sthapatya Ved literature preserves the arrangement of 32 external gods and 13 internal gods. The format for these 45 external and internal gods is provided by the hypercube-4, the format of the Idol of Lord Brahma, creator the supreme.

A4 : 8B3 gives us that within 4-space, the 8 boundary components would get fixed with 8×4=32 coordinates. This together with the

fixed 13-edged cube within the domain would provide an arrangement of 32+13=45 fixations.

The above organization of the format of hypercube-4 with the availability of 45 characteristics arrangements would help us comprehend the enlightenment of Ur-Mahabharatam about the text of Srimad Bhagwad Gita as that this text is of 745 Shalokas out of which 700 Shalokas are the

expressed Shalokas while 45 are the unexpressed Shalokas. The available text of Srimad Bhagwad Gita with us is the text of 700 Shalokas and the remaining 45 unexpresed Shalokas remain unmanifest in this world and these are lively and available at the format beneath.

Source scripture:Gita Pariman Shaloka of Bhishma Parva of Ur-Mahabharatam and Sthapatya Ved literature.

Scripture Formats 25:

VYKATA, AVYAKATA, AVYAKATO-AVAKATAT AND PURUSHA #5:

32 INSTALLATION OF SHIV LINGAM AT THE CENTRE OF MYSTIC SYMBOL

Sri Shiv Puran preserves the enlightenment as that Shiv Lingam is to be installed at the centre of the mystic symbol. The mystic symbol is the format of the Idol of Lord Brahma, the creator the supreme. Shiv Lingam is the solid dimensional expression of the Shiv Lok (5-space). The centre of the mystic symbol is the center of hypercube-4

/ origin of 4-space. The origin of 4-space is the seat of compactification of dimensional spaces from 5-space onwards. The Shiv Lingam emerges from within the origin.

Source scripture:Sri Shiv Puran

Scripture Formats 26:

DESCRIPTION OF THE WHEEL OF CAUSE BRAHMAN #1

Sawteshwara Upanishad describes the wheel of cause Brahman as of 1 (Nemi), 3 (Vrit), 16 (Antah), 50 (Aras), 20 (Pratya), 6 (Ashtak), 1 (Pash, Vishwarupa), 3 (Marg), 2 (Paap, Punya) and 1 (Karan). The artifices of whole numbers availed in that sequence are: 1, 3, 16, 50, 20, 6, 1, 3, 2, 1.

Artifices of whole numbers 1 & 3:

One as 1-space in the role of dimension creates 3-space.

Artifice of whole number 16:

The tri-monad, a monad of 3 parts, and an interval of 3 parts gives us 16 versions as:

(1) close interval when is split into three parts, it gives us 4 versions as:

(a) close interval, open interval, close interval

(b) close interval, half close interval, half close interval

(c) half close interval, half close interval, close interval

(d) half close interval, open interval, close interval

(2) half-close interval (with second end point missing) when is split into three parts, it gives us four versions as:

(a) close interval, open interval, half close interval

(b) half close interval, half close interval, half close interval

(c) half close interval, close interval, open interval

(d) close interval, half close interval, open interval

(3) half-close interval (with first end point missing) when is split into three parts, it gives us four versions as:

(a) half close interval, open interval, close interval

(b) half close interval, half close interval, open interval

(c) open interval, close interval, half close interval

(d) open interval, half close interval, close interval

(4) open interval when is split into three parts, it gives us four versions as:

(a) half close interval, open interval, half close interval

(b) half close interval, half close interval, open interval

(c) open interval, close interval, open interval

(d) open interval, half close interval, half close interval

Artifice of whole number 50:

3-space in the role of dimension creates 5-space and as such 10×5=50 coordinates of solid dimensional frame are required to fix the boundary of 5-space constituted by 10 hypercubes-4.

Artifice of whole number 20:

The domain-boundary fixation of hypercube-5 can be had in terms of the artifice of whole number 20 which admits arrangement and organization as 20=5×4.

Artifice of whole number 6:

The origin of hypercube-5 is the seat of 6-space and as such origin of hypercube-5 admits fixation in terms of the artifice of whole number 6.

Artifice of whole number 1, 3, 2 & 1:

The origin of origin of hypercube-5 is the seat of 7-space. The artifices of whole numbers 1, 3, 2 & 1 together are the arrangement of the artifice of whole number 7. Going from the artifice of 1 to the artifice of 3 is the going from dimension to domain and going from 1 to 2 is going from the dimension to the boundary.

The above expression of the wheel of "cause Brahman" takes us uptil the origin of the origin of the transcendental world of 5-space.

Source scripture:Swateshwara Upanishad (Chapter 1 Mantra 4)

Scripture Formats 27:

DESCRIPTION OF THE WHEEL OF CAUSE BRAHMAN #2

Sawteshwara Upanishad describes the wheel of cause Brahman as of 1 (Nemi), 3 (Vrit), 16 (Antah), 50 (Aras), 20 (Pratya), 6 (Ashtak), 1 (Pash, Vishwarupa), 3 (Marg), 2 (Paap, Punya) and 1 (Karan). The artifices of whole numbers availed in that sequence are: 1, 3, 16, 50, 20, 6, 1, 3, 2, 1. In the reverse order the artifices of whole numbers give us the sequence as 1, 2, 3, 1, 6, 20, 50, 16, 3, 1. This sequence admits expression as: 1, 2, 3, 4=1, 4 leads to 6, 6 leads to 9+7+3+1, 4*5=20 leads to 5-space with 4-space boundary and 5*(1+2+3+4)=50 solid points fixation of boundary, the tri-monad format of solids gives us 6-space at the centre of 5-space as 5+6+5=16 and 3 as tri-monad format and 1 as the linear order of 3-space.

On Om formulation, which is the basic formulation for organization on 4-space format, sequentially the above artifices of whole numbers leads to the following phases of organization of the wheel of Cause Brahman.

The phase of artifices of whole numbers 1, 2, 3, 4 and 1, 2, 3, 1 :-

The phase of artifice of whole numbers 6:

The phase of artifice of whole number 20:

The phase of artifice of whole number 50:

The phase of artifice of whole number 16:-

The phase of artifice of whole number 3:-

The phase of artifice of whole number 1:-

Source scripture: Swateshwara Upanishad

Scripture Formats 28:

GORAKSHAKO UPANISHAD (ENLIGHTENMENT OF PROTECTION OF ETERNAL GLOW) #1

Gorakshako Upanishad is the source scripture of the Nath sect. Guru Gorakshanath, the incarnation of Lord Shiv is the author of this scripture. This scripture is also known as Sidha Sidhanta Padhati. This is a scripture of 6 Upadeshas (enlightenment). The scripture range is of 353 Shalokas. The split up of this range is as of 73, 39, 13, 29, 84 and 115 Shalokas. The titles of the six Upadeshas are:

• Pinda Utapatti (73 Shalokas range): Pinda means body and Utapatti means emergence. As such the simple English rendering for the title of first Upadesha is "Emergence of Body". The enlightenment of this Upadesha is the enlightenment is the emergence of human body. This enlightenment is organised on the geometric format of 73 Shalokas range. The artifice of whole number 73 has been well utilised for the organisation of this Upadesha • Pinda Vichaar (39 Shalokas range): Pinda means body and Vichhar means the deep thought. As such the simple English rendering for the title of second Upadesha is "Deep thought about the body". This enlightenment is about the basic characteristics of the geometric format for the life flow within the human body. • Pinda Samviti (13 Shalokas range): Pinda means body and Samviti means knowledge. As such the simple English rendering for the title of third Upadesha is

"Knowledge of human body". This enlightenment is about the basic knowledge of life within the human body. • Pinda Adhara (29 Shlokas range): Pinda means body and Ahdara means base. As such the simple English rendering for the title of fourth Upadesha is "The ultimate base of human body". This enlightenment is about the ultimate base of life within the human body.

• Samras Karanam (84 Shlokas range): Sam means common, Ras means essence and Karanam means ultimate sustenance. As such the simple English rendering for the title of fifth Upadesha is "Common essence of the ultimate sustenance of life". This enlightenment is about the common essence of the ultimate sustenance of life within body • Avadhut Yogi Lakshanam (115 Shalokas range): Avadhut Yogi means fully elightened being and Lakshanam means characteristic features. As such the simple English rendering for the title of sixth Upadesha is "The characteristics features of fully enlightened being". This enlightenment takes us to the common ultimate state of enlightenment for the living beings.

Scripture Formats 29:

GORAKSHAKO UPANISHAD (ENLIGHTENMENT OF PROTECTION OF ETERNAL GLOW) #2

Guru Gorakhnath, the author of the Upanishad is incarnation of Lord Shiv, the overlord of real 5-space. Therefore, the basic format for the organisation of the scripture gets fixed as of hypercube-5 / real 5-space.

Gorakshako Upanishadic text is of 353 Shalokas range. The artifice of whole number 353 is unique in many ways and it, in the light of the enlightenment of the scripture and the organisation format beneath, helps us reach at the basic geometric lock of manifestation of human body.

It is like the emergence of real 5-space at the origin of affine 3-space. The origin of affine 3-space is the seat of real 4-space and as such the transcendence and emergence at this seat is there because of real 5-space being at the base of this seat. The real 5-space itself being a solid dimensional space, this (solid dimensional order) as such locks the seat and the emerging geometric continuum locks the existence phenomena.

This phenomenon of locking and unlocking at the base of the origin of affine 3-space is the basic phenomenon whose comprehension and chasing is to provide us the enlightenment of the manifestation of human body and transcendence therefrom. This life phenomenon is the phenomenon of eternal glow whose protection within the human body is the subject matter of enlightenment of this Upanishad. One name for this discipline may be the discipline of geometry of Vedic genetic engineering.

Scripture Formats 30:

GORAKSHAKO UPANISHAD (ENLIGHTENMENT OF PROTECTION OF ETERNAL GLOW) #3

Guru Gorakhnath (Gorakshnath), the author of the Upanishad, is the incarnation of Lord Shiv and with it the basic format for organisation of the scripture is settled as hypercube-5 / real 5-space.

Om Namah Shivai is the basic Mantra of enlightenment of Lord Shiv. Om is sole-syllable, Namah is a pair of syllables and Shivai is a composition of three syllables. With this, this is the enlightenment of artifices of whole number 1, 2 & 3 and parallel to it 1-space, 2-space and 3-space and finally a tri-monad format and so the solid dimensional order takes us to real 5-space.

The artifices of whole numbers 1, 2 & 3 together also give us $1+2+3 = 1\times2\times3 = 6$. Simultaneously, we have 6 non-negative geometries of 5-space. This as such helps us to reach at the organisation of the scripture as 6 Upadeshas parallel to the artifice of 6 supplied by the basic Mantra as well as the available 6 non-negative geometries of 5-space.

Scripture Formats 31:

GORAKSHAKO UPANISHAD (ENLIGHTENMENT OF PROTECTION OF ETERNAL GLOW) #4

The enlightenment of Gorakshako Upanishad is the enlightenment of Shiv-lok and is the glow of Sri Shivpuran.

Sri Shivpuran preserves the enlightenment as that the gods who were proud of their powers were made to realise the limits of their powers by Lord Shiv as that they were even not capable of making a split of even the blade of grass.

This is precisely the Shloka 26 of Chapter 16 of Satrudra Samhita and it reads as:

"If you are proud and think that you know your strength to be great, O gods, split this blade of grass placed by me, with your own weapons."

The geometric and algebraic message here is that when we creates structures with the help of a binary composition then the elements of the set at first operation give us the composition elements of the form $c = a \times b$. Then when further we operate such composite elements and the resultant elements $d = c_1 \times c_2$ then d takes us uptil the boundary of a 3-space. The domain of 3-space remains untouched though wrapped within the

composed elements.

It is because of it that the blade of grass as a solid remains un-split.

This enlightenment and message deserves to be comprehended well to appreciate as to why our set theory approach is creating mathematical knots and while we get dodged and feel as if we can have space filling curves and why the situations like that of everywhere continuous but nowhere differentiable functions and also the situations like the hypercubes-8 onwards creating a decreasing value sequence at all arise for us and we are not in a position even to logically catch as to why this all is happening. This impossibility to split a blade of grass is the proposition and situation at the base of Fermat's Last Theorem and similar like mathematical problems of the day.

Scripture Formats 32:

GORAKSHAKO UPANISHAD (ENLIGHTENMENT OF PROTECTION OF ETERNAL GLOW) #5

The organisation of the Upanishad as 6 Upadeshas admits arrangement for its 353 Shalokas as 73, 39, 13, 29, 84 and 115. This arrangement is there because of the following format beneath because of the geometries of 0, 1, 2, 3, 4 & 5. Here is drawn the arrangement:

Scripture Formats 33:

GORAKSHAKO UPANISHAD (ENLIGHTENMENT OF PROTECTION OF ETERNAL GLOW) #6 : SELF-REFERRAL STATE

Sri Shivpuran Samhita preserves the enlightenment that when Lord Brahma (the presiding deity of 4-space) and Lord Vishnu (the presiding deity of 6-space) are face to face and are interacting to know the Brahman, there emerges Lord Shiv (the presiding deity of 5-space) in between them as an infinite pillar of fire (Agani Tatva; the third basic element with Prithvi (earth) as first and Jal (water) as the second).

The geometric message of this enlightenment is that when we are in a Creator's space (the spatial order space), 4-space plays the role of dimension for 6-space as domain and the place for the boundary is in between them and it is played by 5-space. The boundary which envelops within itself the domain is zero as far as the domain grains

are concerned. This role of boundary to be zero qua the domain grains is there through out and it is so as within spatial order, 1-space admits -1 space as its dimension and 0-space iin the role of the boundary with 2-space as the origin.

This organisation because of 2-space in the role of origin gives us the arrangement because of which there emerges splitting of the positive and negative orientation of 1-space and hence of the interval, and as of the infinite line. This splitting of the orientations as positive and negative orientations makes them as absolutely different worlds as much as that the positive orientations takes us to +1 space and the negative orientations takes us to -1 space. With this, there automatically emerges a jump over a 0-space. In other words, 0-space marks its presence of its own and its emergence is spontaneous and is always there even if remains latent in between the positive and negative orientations. This is the self-referral state. The positive orientations as 1-space and further in the role of dimension of 3-space gives us as many as 7 geometries for 3-space. Likewise the change of orientation would take us from -1 space to -3 space but in a reverse order as much as that -1 space would become the domain and 33 space as the dimension. The 7 geometries here for -3 space and then the continuity from -3 space to +3 space with 0-space in between -1 space and +1 space gives us two parallel set ups like the pair of objects with their reflection images and because of it a self-referral state makes it possible to have self-evaluation and self-appraisal of one's knowledge and it is there at the format of the division of the brain within human heads as of left and right parts.

The enlightenment of Sri Shivpuran from the stage of emergence of Lord Shiv as infinite pillar of fire in between Lord Brahma and Lord Vishnu goes further as that both Lord Brahma and Lord Vishnu interacted and asked as to what this form is there and when both showed ignorance about it to each other they decided as that one should go upward and try to know uptil which the pillar takes and the other should go downward and try to know uptil what it takes to. Both had tried and realized that it was not possible to scale the pillar.

This enlightenment made them realized the transcendental state of Lord Shiv (the presiding deity of real 5-space) and both of them attained selfreferral state and ultimately the transcendental state and realized that it was not sufficient only to go upward and the going upward and going downward were two different organizations and arrangements and those can be known only with reference to the orientation free state of 0-space emerging between the positive and negative orientations spaces.

Transcendental Basis of Vedic Mathematics

(Panel of Jury set up by the Bhartiya Vidya Bhavan to select candidates for Shri Guru Gangeshwaranandaji Veda Ratna Puraskar-1997 had selected Dr. S. K. Kapoor for his excellence and service rendered in the field of Vedic Mathematics. The Panel of Jury had considered the evaluation report titled "Transcendental Basis of Vedic Mathematics". As good information about some aspects of Vedic mathematics of the report would be of great interest for the research scholars working in the field and as such same is being included here).

My **studies** culminating into the Doctoral Degree for my thesis titled "Mathematical Basis of Vedic Literature" accepted by Faculty of Mathematics, Kurukshetra University, Kurukshetra, summed up conclusions as under:

Sum up of the results as those flow while working florescence-systems on Om formulation within framed domains are:

1.   In a nutshell, the conclusions are that the mathematics precedes the composition of Rigveda Samhita. Vedic Mathematics helped to transform the Universal set of knowledge as a speaking language and in the process itself as well stood transformed as such and assimilated its identity into the Vedas. Within Vedas, all disciplines of knowledge transform their identity and get assimilated into florescence systems admitting 432000 components channelizable on Om formulation. As such, need is to rewrite the history of mathematics, even the intellectual history of

man well admitting fundamental unity of human intellect, the message with which the Rigveda ends "Samanam-astu.........Sushasati".

2. One line conclusion, of all the above conclusions, is that the entire Lower Vedic Mathematical domain stands exhaustively covered by single formula:

3. And the above formulation as well is nothing but the extended version of Divya Ganga flow through Om formulation. Divya Ganga flow crystallizes as florescent frames for the Eternal paths beyond and to which the Vedic florescence systems ultimately transformed.

The thesis is divided into 12 chapters with contents as:

1. Vedic mathematics

(Introductory concepts)
– To settle the text

2. Om formulation

(Vedic mathematics applications)

– To settle equivalent formulations:

·   Om

- · Pranava
- · Aum
- · Onkar
- · Udgitha
- · Vashatkara
- · Swastik
- · Anmoh

3. Vedas

(Mathematics as a speaking language)

- · Rigveda
- · Yajurveda
- · Samaveda
- · Atharvveda

4. Adi Valmiki Ramayana

(Vedic mathematical basis)

– Derivation of the frames and systems on

Om formulation in terms of framed domains sequence.

5. **Urmahabhartam**

(Vedic mathematical basis)

– Derivation of the frames and systems on

Om formulation in terms of framed domains sequence.

6. **Srimad Bhagwad Gita**

(Vedic mathematical basis)

– Derivation of the frames and systems on

Om formulation in terms of framed domains sequence.

7. **Sri Vishnu Shastranam Satotram**

(Vedic mathematical basis)

– Derivation of the frames and systems on

Om formulation in terms of framed domains sequence.

8. **Srimad Durga Saptsati**

(Vedic mathematical basis)

– Derivation of the frames and systems on

Om formulation in terms of framed domains sequence.

9. **Upanishads**

(Vedic mathematical basis)

– Derivation of the frames and systems on

Om formulation in terms of framed domains sequence.

– Prasno Upanishad; Derivation of the frame and systems.

10. Shad Darshan

(Vedic mathematical basis)

– Derivation of the frames and systems on

Om formulation in terms of framed domains sequence of

· Nyaya Darshan

· Sankhya

· Vaisesika

· Yoga

· Mimamsa

· Vedanta

· Sankarshna

11. Puranas

(Vedic mathematical basis)

– Derivation of the frames and systems on

Om formulation in terms of framed domains sequence of Puranas.

– Srimad Bhagwat Puran; Derivation of frame & system.

12.   Devanagri alphabet

(Vedic mathematical basis)

–   Derivation of frame and systems of the alphabet, its
    structure, forms and formulations of the letters within Pranava
    domain on

Om formulation for working out the sunlight florescence systems within framed domains.

– Maheshwara Sutras and Sanskrit grammar.

– Saraswati Mantras and Vedic grammar.

– Derivation of classical and languages alphabet.

– Mother computer language for all computer systems.

With respect to the value of research work, Professor in Structure Engineering, **Dr. Anand Parkash** of Civil Engineering Department, University of Roorkee, had conveyed in 1986 to Prof. L. R. Varmani, Department of Mathematics in Kurukshetra, Kurukshetra:

"It is my pleasure to convey to you my appreciation of the work undertaken by Mr. S. K. Kapoor in the basis artifice of our alphabet and number system conveying the basis energies channelization into atomic

frames and their structures. His study of the sunlight reflecting on the different number frames resulting into all artificial intelligence and value judgment has the potential of a breakthrough in scientific thoughts bearing on the understanding of our universe permeating throughout our vedic literature.

I take this opportunity to congratulate you all the all-valuable inspiration and guidance for the brilliant research output by him.

With regards."

Simultaneously, **Professor Anand Parkash** had enclosed general appreciation of the research result as under:

"It was very satisfying to listen Mr. Sant Kumar Kapoor to decipher the hidden code in the construction of alphabets and numbers channelising the basis energies in the atomic frames constituting their structure. His formulation that there are 108 basic energy sources constituting the fundamental format of the atomic tables is noteworthy.

His attempt to have breakthrough with the insight into sunlight being the basic source of all artificial intelligence and value judgment in this universal, interlinking the modern scientific knowledge with the vedic thoughts, deserve all encouragement and support for advancing the cause of applied research.

I with him all success in his mission."

Professor J. N. Kapur, a well-known mathematician of our country, having hundreds of research articles and dozens of books of mathematics, and experience of more than four decades of actual teaching of mathematics at graduate and postgraduate levels, and of guiding several research scholars, had occasion to consider the geometrical validity of the framed domain sequence being arrived at in the thesis i.e. (a^n:$2na^{n-1}$, n=1, 2, 3, 4, ...) and his considered opinion conveyed to Professor Krishanaji, read as:

"The sequential interpretation of $a^3/6a^2$, $a^4/8a^3$, $a^5/10a^4$ are valid.

'n' dimensional hypercube has 'n' dimensional content 'a^n'. It has 'n–1' dimensional content '$2na^{n-1}$' and the ratio is '$a^n/2na^{n-1}$'. This has also 'n–2' dimension, 'n–3' dimension, ... content which I have discussed in my article.

This part can be rigorously justified."

Professor Krishnaji in his letter dated March 31, 1988 addressed to Hon'ble Chief Justice of Punjab & Haryana High Court had requested for sparing the services of mine for institute of Vedic Science for two years conveying as:

"We must congratulation you for having in your department such a brilliant and creative mind as Sri S. K. Kapoor, C.J.M., Rohtak, who can authentically expound the foundations of all order in nature, as the basis of the Vedic literature available to us through the oral honoured Vedic tradition. The work by him in his Ph.D. thesis is so basic that the authenticity of the Veda and Vedic literature is established with such mathematical precisions and credibility that through his work, it is possible now to establish the traditionally available Vedic literature as the most orderly and comprehensive literature of a perfect science of life. This has the potential to revolutionise the education in all parts of the world and bring perfection to life on Earth.

This revival of the absolute order with which the unified wholeness of natural law functions and maintains orderliness at every stage of evolution of life, is a blessing for every one in this scientific age, which is rising to be the age of enlightenment through Vedic Science, **Maharishi Mahesh Yogi** is currently formulating the Vedic science and will very much appreciate, if Sri S. K. Kapoor's time and talent are available for structuring Vedic science at a rapid pace, which is such a perfect science of life that with its both approaches - subjective and objective, it far exceeds the benefits of modern science which functions through objective approach only. We will be grateful to you, if you kindly spare his services for our Institute of Vedic Science preferably for two years in order to propagate the results of his research to our universities in Europe and America - Maharishi European Research University, Switzerland, Maharishi International University, Norway, Holland and USA and the forthcoming University of Natural Medicine in Brazil and other institutes of higher learning.

With respectful regards" The report of work done during two year (1988 to 1990) as Visiting Professor in the institute with Professor Krishnaji as Chairman, as submitted by Professor Krishnaji to Hon'ble Chief Justice of Punjab and Haryana High Court, Chandigarh, is as under:

"Shri Sant Kumar Kapoor, Chief Judicial Magistrate, Rohtak, was granted leave by your goodself for two years to carry on research in Vedic Mathematics as a Visiting Professor, in our Institute. He joined us on 25th May 1988.

Shri Sant Kumar Kapoor has done exceptionally meritorious work in Vedic mathematics. He has developed concepts involved in

the structure of "Om" and the two Vedic structures "Know Brahman quarter by quarter" and "know fourth quarter Brahman as integrated value of the first three quarters." He has also developed Vedic concepts of multi-dimensional geometrical space and structural frames and systems.

He has established that the regular bodies of geometrical domains constitute a framed domains sequence.

$$a^n/2na^{n-1}, \text{ where } n = 1, 2, 3, 4, \ldots\ldots$$

and a=dimensional unit.

Using the above concepts, he has analysed several Vedic scriptures. Following are the results of his research activity:—

(i)   Mathematical concepts and application to structural frames and systems of Sri Sri Vishnu Sahastranam Stotram.

(ii)   Vedic mathematical concepts and applications to structural frame and systems of Sama Veda Samhita.

(iii)   Vedic mathematical concepts and application to structural frames and systems of sixteen sutras.

(iv)   Vedic mathematical concepts and application to structural frames and systems of Shrimad Bhagwad Geeta.

(v)   Vedic mathematical concepts and application to unsolved mathematical problems – Five proofs of Fermat's Last Theorem.

All the above have been published as Institute Reports. The last one "Fermat's Last Theorem" has been published in the form of a book. Three Proofs have been published as a research paper in M.I.U. Journal "Modern Science & Vedic Science" Vol.3, No. 1, pp 75-104, 1989 USA. The two proofs have been submitted as a research paper to "Mathematical Reports of the Academy of Sciences" Canada. This work has acquired great importance because the original theorem was proposed by French Attorney and mathematician Pierre de Fermat in 1637 and nobody has succeeded in getting the proof inspite of continuous attempts by distinguished mathematicians for more than 350 years. Shri S. K. Kapoor has been awarded the Ph.D. degree by the Maharishi

Research University, Seelisberg, Switzerland for his work on Sam Ved Samhtia.

The leave of Shri S. K. Kapoor is due to expire on 24th May, 1990, hence this report is sent for your information and official record."

Simultaneously, Professor Krishnaji had made a request with Hon'ble Chief Justice for further leave for Institute, which was allowed and I worked for another two years (1990-1992) as Visiting Professor and my research results have been summed up in one of the articles by Professor Krishnaji in Mathematics Today and reproduced as Appendix A of my book "Fermat's Last Theorem and Higher Spaces Reality Course".

"Vedic mathematics was lost to the modern world over several thousand years. Fortunately, the renowned scholar **Jagadguru Swami Bharti Krisna Tirthahji Maharaj**, Shankracharya of Sharda Peeth and Goverdham Math discovered 16 Vedic Sutras and 13 Upsutras in the Parishistha of Atharvved. After continuous Sadhana and hard work, he was able to decode them and get wide ranging mathematical principles and applications from them.

He found that these Sutras cover all aspects of mathematical science in depth. He wrote sixteen volumes on Vedic mathematics covering all aspects of these sutras in depth. Unfortunately, the manuscript was lost which fact was finally confirmed in 1956.

During his last days when his health was failing and his eyesight was weak, he rewrote from his memory an introductory account of the subject. He attained Mahasmadhi in 1960. Later in 1965 a book entitled "Vedic Mathematics" was published. This book is edited by Dr. V.S.Agarwala with the help of Smt. Manula Trivedi on the basis of manuscript and notes left by Swamijee.

This book is therefore, the first book to give a glimpse of Vedic mathematics and to reestablished the subject. The book attracted the attention of several Indians and foreigners. Dr. Narinder Puri of Roorkee University took up the cause of Vedic Mathematics in right earnest.

His Holiness Maharishi Mahesh Yogi spread the message of Vedic mathematics throughout the world by sending Dr. Puri to several countries and making it possible for many schools all over the world start teaching Vedic mathematics.

A former minister of Human Resource Development, in the Government of India, Sh. P.V.Narasima Rao made a reference in Parliament about the work on Vedic mathematics, which created a wider interest in the nation. Rashtritya Ved Vidya Pratishthan started looking into the matter and appointed a committee on Vedic Mathematics.

During the same period a controversy arose about the source of these 16 Sutras and the level of mathematics contained in them. One view was that these Sutras do not have a Vedic source and that they deal only with simple arithmetical operations.

In the meantime, Dr. Sant Kumar Kapoor, inspired by integrated impact of the Ganita Sutras, started working on basic aspects of the mathematical structure of Vedic literature. He got several clues from Ganita Sutras, Maheshwara Sutra and many other Vedic Mantras.

He was inspired by the divine blessing from Yograj Sri Sripad Babaji of Vrindavan and His Holiness Maharishi Mahesh Yogiji at Maharishi Nagar. He has been awarded Ph.D. degree by Kurukshetra University, in December 1990 on his thesis titled "Mathematical Basis of Vedic literature".

His work shows that the potential of Ganita Sutras is much higher than what appears in the book "Vedic Mathematics" and the mathematical structure of Ganita Sutras is similar to that of Samved indicating that Ganita Sturas belong to Vedic family.

His work shows that the Devnagri alphabet and the Vedic scriptures are mathematically organized. Perhaps a more important aspect of his work in the existence of Real Geometric Spaces of higher dimensions in the form of a continuum.

A comprehensive description of his research is given in the next section. Dr. Sant Kumar Kapoor is presently working as a Visiting Professor in the Indian Institute of Maharishi Vedic Science & Technology, which is a part of Maharishi Ved Vigyan Vishwa Vidyapeeth, Maharishi Nagar. Three research students are working in our institution on the structure and properties of fourth, fifth and sixth dimensional spaces.

Vedic mathematical Research done by Dr. S. K. Kapoor

Studies reveal that knowledge and organisation of knowledge are two distinct disciplines. The thesis of Dr. S.K.Kapoor is substantively covering the organisational aspect of Vedic knowledge. The main results of the thesis and his subsequent research can be summed as under:

1.	Real 4 and higher dimensional spaces do exist.
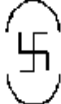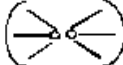
Real 4 and higher dimensional spaces were not only known to the Vedic seers but those were precisely availed by them for organisation of Vedic knowledge.

Vedic alphabet format is a precise setup of4-space. The alphabet letters of Devnagri script, their forms formulations, combinations and rules etc. are precisely mathematical.

Sakala Rigvedic Samhita is the oldeset scripture of mankind. The organisational format of this Samhita is precisely that of real 6-space.

Vedic knowledge accepts a measuring rod constituted by regular bodies of the first six real dimensional spaces which admit formulations as:

Interval	Square	Cube	Hypercube-4	Hypercube-5	Hypercube-6
——	□	(cube)	(hypercube-4)	(swastika)	(hypercube-6)
1-space body	2-space body	3-space body	4-space body	5-space body	6-space body

The organisational format of Srimad Bhagwad Gita emerges to be of prime importance as it is parallel to the organising power of the knowledge content of the scripture. This format tallies with the format of human body on the one hand and the sun on the other hand as of real 6-space.

The Trinity of Gods namely Brahma, Mahesh, Vishnu are the overlords of real 4, 5 & 6 spaces respectively.

The geometrical continuum expressed as manifestation layers of 4 folds of consecutive dimensional spaces contents. These folds of the nth manifestation layer can be represented as under:

First Fold	Second Fold	Third Fold	Fourth Fold
Dimension	Frame	Domain	Origin
(n-2) space	(n-1) space	n-space	(n+1) space

content	content	content	content

The transcendence from one manifestation layer to another manifestation layer giving rise to the following (five steps) chain reaction or five steps, which are possible within the setup of Panch Mahabhut.

Manifestation Layer	Dimension	Frame	Domain	Origin
nth	Space fold (n-2)	Space fold (n-1)	Space fold n	Space fold (n+1)
(n+1)th	Space fold (n-1)	Space fold n	Space fold (n+1)	Space fold (n+2)

Transition from one space to another space is to be had in terms of unlocking of the seals of the origin points of all the four folds of the manifestation. The modern mathematical models of transition from straight line to plane deserve serious reexamination. In particular the axioms of space filling curves and the axioms of 'one' without a predecessor deserve close scrutiny as their rationale emerges to be without basis.

The role of real numbers additive group (R,+) and real numbers field (R,+,×) with reference to straight line deserve to be differentiated.

The plane deserves to be studied as four geometrically distinct quarters. One faced plane and two-faced plane are two distinct geometrical setups and they deserve to be taken up as such.

The concepts of origin and dimension are two concepts with respect to which the modern geometrical models are not up to date. These two concepts deserves to be studied in detail as transcendence to the higher dimensional spaces is possible only in terms of their understanding.

Human body is a compactified phenomenon of multi-layer physiological existence. The start with state of existence is that of waking state, which is parallel to the expression of 1-space as dimension into 3-space domain. Sequentially, the existence phenomenon unfolds until seventh state of consciousness, which would be corresponding to the 7-space as dimension into 9-space domain.

The origin point of the 6-space, being the 7-space setup, the human body, geometrically, turns out to be hypercube-6 and this would explain how the primordial sound, the planetary effects, the Yajna oblations etc. operate and precisely influence the individual existence patterns.

Srimad Bhagwad Gita is one such scripture whose organisational format precisely workout for us the structural set up and frames of the 6-space. The study zone of Srimad Bhagad Gita can be worked as under:

Srimad Bhagwad Gita
Study Zone

$a/2$	$a^2/4a$	$a^3/6a^2$	$a^4/8a^3$	$a^5/10a^4$	$a^6/12a^5$	$a^5/10a^4$	$a^4/8a^3$	$a^3/6a^2$	$a^4/4a$	$a/2$
—	□	(cube)	(hypercube)	(symbol)	(symbol)	(symbol)	(hypercube)	(cube)	□	—
2×1 $=2$	4×2 $=8$	6×3 $=18$	8×4 $=32$	$10{>}5{=}50$ $50\times7{=}350$		$10{\times}5{=}50$ $50\times7{=}350$	8×4 $=32$	6×3 $=18$	4×2 $=8$	2×1 $=2$
Orbitals				$350+350=700$						
2	6	10	14	$18=5+6+7$						

The organisational setups of Ganita Sutras, Maheshwara Sutras, Saraswati Mantras, Gyatri Mantra and Om formulation deserve interdisciplinary explorations.

Sankhay Nistntha and Yoga Nistha are complementary and supplementary of each other and as such their complementary nature and supplementary nature deserve to be distinguished well. Non-differentiation of the same is bound to deprive us of most of the results in specific forms.

Now let me take up how the subject contents of my different books are indexed in their prefaces. First starting with "Vedic Mathematical Study of Structural Frames and Systems of Sri Sri Vishnu Sahastranam Stotram", published by Maharishi Ved Vigyan Vishwa Vidyapeetham, Maharishi Nagar–201304, (INDIA) (1991):

"Preface

The present study aims at approaching the organisation format of the scripture; Sri Sri Vishnu Sahastranam Stotram. This is a scripture of 107 verses and it composes 1000 names of Lord Vishnu, who is overlord of real 6-space.

Though the modern mathematics too talks of dimensional spaces higher than three but those are mere mental-constructs. The modern mathematics has striped the concepts of dimension from geometrical reality and as such the suffix 'Real' before 6-space is of real significance here in this study.

If it is only while faced with problems of the classifications of the geometries of dimensional spaces and the sporadic finite groups, we are really face to face with the intensity and richness of each space beyond 3 space. Sylvestor's classification theory of n+1 geometries of n-space is just a property of real 4-space.

It is a simple shift from monad without partes which gives us 1-space as dimension of 3-space to synthetic monad of two parts of real 4 space with 2-space as dimension. In a sequence, the real 5-space and 6-space are having synthetic monads of 3 parts and 4 parts respectively and accordingly their dimensions are 3-space and 4-space.

Vedic literature avails real 4, 5 & 6 spaces for organisation of knowledge. These spaces respectively contribute 24, 25 and 26 Tatavs (elements / characteristics properties).

The step beyond Sylvester's classification or n+1 geometries of n-space would be to enter real 5-space where we shall be getting 2n+1 geometries of signatures –n to +n of n-space.

The step beyond the 25th sporautic finite group would be a step into the real 6-space and we straight way get the number of elements of 26th sporadic finite group as 10×12^{64}. And with it, the classification assignment over which practically we have consumed complete nine decades or this century and still 26th group is eluding, gets answer from ancient wisdom of real spaces.

This would help us appreciate the ancient wisdom to accept the measuring rod of real bodies of first six real spaces admitting ratios of their domain parts as $a^n : 2na^{n-1}$, n = 1, 2, 3, 4, 5, 6.

This all is being added here just to impress upon the rationale for the choice of Sri Sri Vishnu Sahastranam Stotram for organisational study.

However, I would like to add at the outset that by all means it is just a preliminary study into the structural frames and systems of this scripture and the real studies would follow from the pens of really the real privileged souls who, I pray, should spare moments from their blissful samadhi to give the desired direction to the flow of intelligence of the present generation.

Sri Sri Vishnu Sahastram Stotram is the holiest of the Holy Scriptures whose enlightenment was the last discourse to the Pandavas given by great Bishma from his deathbed of arrows in the battlefield of Kurukshetra in the presence of Lord Krishna, incarnation of Lord Vishnu.This, that way, is the scripture of perfection and hence the proper scripture of the Sankhya nistha as well as the Yoga nistha.

His Holiness Sri Sripad Babaji initiated me into Sankhya nistha as the science of organisation of the Universe on the artifice of natural numbers. His Holiness Maharishi Mahesh Yogi has initiated me further in the subject that the Sankhya nistha is the science of self-organising power of the pure knowledge.

The specific processing lines, which I describe as Sripad processing line is to know Brahman quarter by quarter and the Maharishi processing line is to know fourth quarter of Brahman as integrated quarter of first three quarters.

The present study in a way is nothing but the extent to which I could comprehend only that much and over and above that are the limitations on language and what not and so the humble request that they may skip over such stages by their own contemplation which is the only guide in such like adventures or mortals like me regarding the vedic scripture of perfection

× × ×

With all humbleness this study is submitted with the hope that the advanced students of Vedic science and technology will continue the processing further into this and other scriptures. Here is a caution for them that the first correction which the modern mathematics needs in the discipline of geometry is regarding its hypothesis of space filling curves.

This hypothesis deserves to be rejected. The second thing which I would like to suggest is that the continuum be approached the Vedic way as manifested layers of four-folds of four consecutive space-contents and not 'individual dimensional space wise' as is being attempted at present by the modern mathematics.

Before submitting the present study for consideration of the scholars I feel it may duty to share the first principles of decoding the knowledge content from the organisational format of the Vedic scriptures. The keyword of this principle is Shardha and culmination is the word nistha.

The principle operates as: Samsayatma Vinasyanti (Gita-4.40). Practical working rule comes to be that the doubt destroys everything, the scriptural commands deserves to be approached faithfully, the words of seers deserve to be taken up on their face value.

To have an idea that how difficult it becomes to gain anything from the Vedic systems the moment one approaches them with an initial doubts, we can see what mess stands created by the individuals about the powerful systems of Ganita Sutras."

Professor Krishnaji has expressed by way of Forward of this book as:

"I am happy that, I am able to seek the blessings of H.H Mahairshi Mahesh Yogi on the first publication of the Indian Institute of Maharishi Vedic Science & Technology in a record time. Shri S. K. Kapoor, who is Visiting Professor in the Institute has produced, wonderful work, entitled "Vedic mathematical concepts and its application to structures and systems of Sri Sri Vsihnu Sahastranam Stotram".

This publication is the first publication or its kind in which Sh. S.K.Kapoor has introduced the Vedic geometric formula called "Gurudev formula" and has introduced the concepts of "Divya Ganga flow" and "Om formulation".

He has explained the basic difference between conventional geometry and Vedic geometry e.g., the point in Vedic geometry has a structure whereas the point in conventional geometry is dimensionless.

He has gone into sufficient yet restrained details of the new concepts and the rules before applying them to the structural systems or the scripture Sri Sri Vishnu Sahastrannam Stotram.

He has shown without any strain and without any doubt that Vedic mathematical concepts are able to explain unambiguously, the number of names of Lord Vishnu included in every individual Shaloka of the scripture.

His writing comes directly from his thinking. His gift of thinking is original but the inspiration given by H. H. Shri Pad Babaji of Vrindavan and H. H. Maharishi Mahesh Yogi is clearly visible. The knowledge is drawn from the vast treasure of Maharishi Vedic science and technology but the representation is original.

In recent year, there has been a revival of the ancient Vedic knowledge because a very large section of people have started realising that Vedas are the infinite source of complete knowledge and have existed from times immemorial.

However, there has been an unfortunate tendency, primarily due to ignorance, of comparing and trying to understand Vedic science in terms of the modern science. Very few people realise that the modern science utilises only the objective approach whereas Maharishi Vedic Science utilises both objective and subjective approaches to gaining knowledge simultaneously.

The epistemological nature of the ancient Indian knowledge is based on the understanding that the process of intuitive revelation of true knowledge in the individual mind can be controlled by eliminating the difference in the operation of emotions and intellect through their unification by the techniques of Yoga Darshan.

It will be of interest to the student of Vedic science, if they carefully understand the difference between modern science and Maharishi Vedic science.

Vedic mathematics is one particular component of Vedic science. Mathematics is called the queen of sciences and is the fundamental base on which all planning is done and all structures are raised.

Shri S. K. Kapoor is using this as an axiom and has applied the Vedic mathematics concepts as an integral part of Maharishi Vedic Science and Technology to investigate in the volume a particular case of structures and systems of Sri Sri Vishnu Sahastranam Stotram.

The readers may find it difficult to comprehend the subject during the first reading because they are used conditioned to the usual objective approach of conventional mathematics.

The second and subsequent readings, however, will reveal to them the real meaning of concepts and therefore, the immense beauty and power of this knowledge.

The Indian Institute of Maharishi Vedic Science and Technology is a research institute covering all aspects of Vedic Science & Technology including Vedic philosophy, structure of Vedic knowledge, Vedic mathematics, Ayurveda, Jyotish, Ganderva Veda Dhanurveda, Sathapatyaveda etc.

The Vedic science covers the widest possible spectrum from point to infinity and back to the point and the infinitely expanding universe. I hope that the present publication will re-open the infinite sources to pure knowledge, which has always existed in the supreme consciousness and has been frozen in the self-referral individual consciousness also from times immemorial.

One will find that before the main text there is an abstract table giving geometrical coordination of 1000 names of Lord Vishnu. To begin

with, it may be incomprehensible to the understand reader, but it will certainly show that the Vedic geometry deals with the dimensions higher than 3, that is 4th, 5th, 6th dimensional frames whereas conventional geometry does not go beyond third dimensional frame.

The implications of this work are multidimensional and far-reaching. One aspect is the Vedic claim that faithful recitation of Sri Sri Vishnu Sahastranam Stotram can cure all kinds of fevers. This can easily be understood because the studies reveal:

"The Vedic sounds are multi-dimensional domains' frequencies from within a particular dimensional domain as the structure of that domain. When the sounds are pronounced, the frozen frequencies get initiated and the self-organising power of the Vedic sounds sets the frequencies' potentialisation process into action. It is this process whose utilisation is the aim of different Vedic scriptures."

This work is being submitted at the feet of H. H. Maharishi Mahesh Yogi for his blessing.

Jai Guru Dev!"

The book "Vedic Geometry" of mine published by M/s. Arya Book Depot, Karol Bagh, New Delhi (in 1994) indexes it preface as:

"The present introductory volume aims to introduce the ancient discipline of Vedic geometry. We may formally define Vedic geometry as a discipline of Geometry based on Vedic concepts.

Studies of mathematical basis of Vedic literature reveals that 4 and higher dimensional reality was not only known to Vedic Rishis but also put to practical use by them for organisation of pure knowledge on geometric formats, particularly, real 4, 5 and 6 space formats.

Vedic comprehension of geometric reality is characteristically different from our present-day conclusion. Basic difference in the two approaches viz. modern approach vis-a-vis Vedic approach can be appreciated in terms of the concept of dimension. Modern Cartesian dimensional approach makes all dimensional spaces the linear dimensional spaces as much as that 1-space is to play the role of dimension for all dimensional spaces while, on the contrary, Vedic comprehension comes to be that n-2 space plays the role of dimension of n-space.

This glaring difference may well be focused algebraically as that as per modern model we may express 4, 5 and 6 spaces as A^4, A^5 and A^6 while as per Vedic model their expressions comes to be $(A^2)^4$, $(A^3)^5$ & $((A^2)^4)^6$.

The above difference and impact of n–2 space playing the role of dimension of n-space comes to be that it requires 4 consecutive dimensional spaces to manifest a dimensional body as a 4 fold body having distinct dimension fold, boundary fold, domain fold and origin fold.

Our well-known solid bodies having cubes as their representative regular bodies avail 1-space as dimension fold, 2-space as boundary fold, 3-space as dimension fold, and 4-space as origin fold. In general n–2, n–1, n and n+1 spaces together synthesis and manifest 'n' dimensional body which may be designated as n–2 manifestation layer.

Also it may be designated as hypercube-n. This makes our modern set theory or binary compositions a study of 0 manifestation layer and Euclidean geometry a study of 1-manifestation layer while Vedic geometry takes up all manifestation layers within its domain.

The beauty of this discipline lies in its capacity to unify all discipline of knowledge as a single discipline. Illustratively, human body, sun, nucleus or nucleus of atom, 6-space, organisation of knowledge of Srimad Bhagwad Gita etc. etc. are all availing the format of hypercube 6 i.e. 4 manifestation layer.

This would help us appreciate the uniqueness of approach and richness of content of this discipline. But this is just a first glimpse. Real bliss lies ahead with unification of entire existence phenomenon as impulses of consciousness."

This "Vedic Geometry" book has 10 chapters with split-up of contents as under:

Chapter-1

INTRODUCTION OF THE SUBJECT

1.1 Vedic geometry

1.2 Vedic knowledge

Chapter-2

BASIC CONCEPTS AND FORMULATIONS

Chapter-3

TRINITY OF GODS

Chapter-4

SHADCHAKRAS

Chapter-5

VEDIC GEOMETRY

Chapter-6

VEDIC NUMBER THEORY

6.1 Vedic number theory

6.2 Parallelism between artifices of whole number and dimensional
spaces

6.3 Chasing organisation of boundary of 5 space

6.4 Chasing organisation of boundary of 4 space

6.5 Chasing organisation of boundary of n space

6.6 Addition and bindary operation of 1-space

6.7 Substraction and bindary operation of –1 space

6.8 Real line is solid line

6.9 Dedekind's cut work out half open interval.

6.10 Calculus is science of boundary hypercubes.

Chapter-7

GANITA SUTRAS

7.1 Ganita Sutas text

7.2 Organisation format of Ganita Sutras

7.3 Organisation of 16 Sutras

7.4 Organisation of 13 Upsutras

7.5 Organisation of 46 constructs

7.6 Organisation of 520 letters

7.7 To reach at the applied values of Ganita Sutras:

Ganita Sutra-1

Ganita Sutra-2

Ganita Sutra-3.

STRUCTURAL FRAMES AND SYSTEMS OF SAMVED SAMHITA

STRUCTURAL FRAMES AND SYSTEMS OF SRIMAD BHAGWAD GITA

Chapter-10

CONCLUSION AND THEIR APPLICATIONS TO THE

SOLUTION OF FERMAT'S LAST THEOREM

International Sanskrit Research Academy (Regd. Trust), Bangalore in its letter dated June 22, 1996, conveyed its editorial team's view regarding Chapter-9 titled "Structural frames and systems of Srimad

Bhagwad Gita" of my book "Vedic Geometry" (pages 433 to 458) as under:

"This is an inter disciplinary study bringing out the link between the Vedic geometry and the classical text of philosophy namely Bhagavagita in the Chapter-9. This study can further lead us to understand the relation of Gita with other important scientific disciplines in the Indian tradition about which the present knowledge is very meager. This article is a stimulator for further studies."

In the Preface to my book "Fermat's Last Theorem and Higher Spaces Reality Course" published by M/s. Arya Book Depot, the subject content is indexed and focused as under:

"Preface

Present phase of intellectual history of man begins with seventeenth century. Over all these years, one statement, which remained source of intellectual challenge, is the statement of Fermat's Last Theorem. It is rightly stated "those non-mathematicians who really wants to understand the essential nature of mathematics and how it is created ought to begin with this discussion" (of our recorded history how bravely we fought to conquer the fort of this statement).

The French Attorney and mathematician Pierre de Fermat (1601–65) made his assertion in 1637 as the following note (original in Latin admitting English rendering translation as given below) in the margin of

mathematics book (Bachet's translation of Diophantus' Arithmetica, great classics of ancient Greek mathematics) he was reading at that time:

It is impossible to separate a cube into two cubes, a biquadrate into two biquadrate, or in general any power higher than second into two powers of like degree. **I have discovered a truly remarkable proof which this margin is too small to contain**'

Prof. Paulo Ribenboim in his essay titled "Early History of Fermat's Last Theorem" highlights amongst other features, the fact that despite efforts no proof could be traced from the paper left behind by Fermat and that one school of thought is gaining grounds when he adds: 'It is very difficult to understand today how the most distinguished mathematicians could have failed to rediscover a proof if one had existed.'

This article despite above reservations earned a hopeful editorial comment: 'It is amazingly simple question but whose solution eluded the world, the world of mathematics to this very hour.'

The present work approaches this theorem from many angles and put forwards several alternative proofs but the crowning jewel is the equally simple answer for an amazingly simple question. The answer runs as that on format of volume of cube;

$$z^3 = x^3 + y^3 \text{ implies}$$

$(z–2)^3 = (x–2)^3 + (y–2)^3$ as

$a^3 = (a–2)^3 + 6(a–2)^2 + 12(a–1)^1 + 12(a–1)^0$

Number value cube = volume + surface area + length of edges + value of corner of geometric cubes.

The law of impossibility of infinite descent proves the case n=3.

As such the dimensional order of odd hypercube-n such that n=2m+1 comes to be 1×3×5×7×.........2m+1 and for even hypercuebs-n such that n=2m comes to be 2×4×6×8×.........2m, therefore, for all hypercubes-n such that n=4 implies that dimensional order of hypercube n is divisible by 3. Therefore, n is divisible by 3.

Therefore, the general case for n=4 immediately follows from case n=3 as we can rewrite $z^n = x^n + y^n$ as $(z^{n/3})^3 = (x^{n/3})^3 + (y^{n/3})^3$. The case n=4 was proved by Fermat himself. The initial choice or format of volume of cube restricts n to be greater than 2. Hence, the general proof.

The source concepts at the base of above proof is: n–2 space plays the role of dimension of n-space. It is well preserved in our Vedic literature. Two such references are Uttarkand 79(ka) Ramcharitmanas and Bhagwad Mahapuran (10.9.15-16).

General Proof (at pages 104-110 of this book) was sent by the author to Prof. Paulo Ribenboim who referred it to referee but unfortunately lost it.

To be at most natural answer is an intellectual satisfaction but his is the beginning of the new wonderful higher dimensional reality displayed beyond this point.

The mathematical truth of this theorem is the basic foundation stone for jumping from three space reality to four and higher space reality. Aim of this work is to attempt a school courses for higher dimensional mathematics to mature the young brains by exposing them to the geometric formats of mathematics, science & technology of real three, five and six spaces over a duration of post-middle four years duration of school education so that present generation may have taste of the bliss of Vedic wisdom.

The efforts of the author would get amply rewarded if this work helps the students and teachers of mathematics to think about the ways and means of coming out of a single space (three space) model of mathematics, science and technology.

Eternity of Vedic knowledge is there because of eternal organisation formats of Vedic knowledge. Idols of Trinity of Gods manifest on formats of hypercubes 4, 5 and 6. These together as three folds of four manifestation layer with 4,5,6 and 7 space as dimension, boundary, domain and origin fold constitute a really wonderful format being availed as organisation format for Vedic wisdom.

Because of it, seven-place value system has a unique role to play. As is evident from the table below, all the six numbers 1 to 6 of seven-place value system acquire same value i.e 1 for power 6.

Digits

Powers	1	2	3	4	5	6
1	1	2	3	4	5	6
2	1	4	2	2	4	1
3	1	1	6	1	6	6
4	1	2	4	4	2	1
5	1	4	5	2	3	6
6	1	1	1	1	1	1

As such, it may be very easy to physically test even case i.e. n–2m cases for n>4 on seven place value system."

The book "Foundations of Higher Vedic Mathematics" published by M/s. Arya Book Depot, has indexed in its Preface as:

"Ved means 'knowledge'. Studies of available Vedic literature reveal that Vedic seers had successfully organised whole range of knowledge as a single discipline as a speaking language. Further, studies reveal that our ancestors could achieve success par excellence by first comprehending Reality which ends up as Triloki (three space) as higher dimensional Reality and secondly, by making use of this comprehension of higher dimensional Reality for the required geometric formats for organisation of Vedic knowledge.

Upanishads are the end-product of Vedic literature. The enlightenment of Upanishads takes us to the fundamental unity of Reality as much as that Purusha emerges to be the first manifested incarnation of Brahm (Sri Sri Vsihnu Puran). The specific enlightenment of Upanishads is that Lord Vishnu, Sun, Purusha, Atman and real six space are organisationally in unison with each other. It is this enlightened comprehension, which may be taken as the source for unification of knowledge on six-space format.

Further, studies of mathematical basis of literature leads to the conclusion that the organisation format of hypercube-6 (being the representative regular body of six space) is structurally very rich and is capable of organizing the whole range of pure knowledge as a single discipline as a speaking language as real six space, if viewed linearly, is a space of 2×4×6=48 linear dimensional order.

Upanishad further enlighten us that Lord Vishnu accepts hypecuube-6 as format for His Idol, Shad-Chakra format of human body admits coordination through Sushmana Nari and takes us to the core of sun parallel to the measuring rod of first six hypercubes accepted by

Sthapatya Ved. In fact, every Vedic literature makes use of one or other aspect of hypercube-6 for organisation of knowledge.

In the opening paragraph of chapter-1 of present studies it has been made specific that: Vedic mathematics, as it is, yet to be explored. Though whole domain and the scope of Vedic mathematics, as it is, yet to be explored but three distinct approaches, to which we may have access at present, are, firstly, 'on the artifices of whole numbers' of Ganita Sutras, as interpreted by H.H. Swami Bharti Krisna Tirthaji Maharaj, secondly 'on the geometric formats' of Maheshwara Sutras, as is expounded by H. H. Sri Sripad Babaji Maharaj, and thirdly, 'on consciousness state of human physiology' as unfolded by H.H.Maharishi Mahesh Yogiji Maharaj, known as 'Maharishi's Vedic Mathematics'.

Present studies are titled 'Foundations of higher Vedic mathematics' as here attempt is being made to reach at the foundations of higher Vedic mathematics on which the Vedic knowledge has been organised as a single discipline as a speaking language. Mahalakshmi Astham Stotram has been taken as the reference scripture for measure the success of studies.

Present study for foundations of higher Vedic mathematics is being divided into four chapters as four steps. The first step is to introduce the basic concepts and formats required for reaching at the organisation formats of different folds of Vedic mathematics text. This as such is the topic of study of the first chapter.

The inner evidence of available Vedic literature makes out that Om formulation is the basic formulation without whose proper understanding it may not be possible to have desired insight into the working rules of Vedic mathematics at the base of the organisation of Vedic knowledge and as such the second topic of study of chapter-2 is 'Om Formulation'.

The organisation of knowledge being for working out the systems which end up as Triloki and as such the third topic for detailed study which need be taken and in fact is being taken up in the present study as chapter-3 is 'Structural richness of a cube'.

With Mahalakshmi-Ashtakam Stotram at the centre and transcendental meditation as the basic technology, attempt has been made to ascertain the specific properties of a geometric space as the Santana (eternal format/real 5-space) accepted for the organisation of Vedic knowledge.

Mahalakshmi Ashtakam Stotram is a scripture of Stuti Shalokas devoted to Goddess Mahalakshmi. Devotees by faithfully reciting these Shaloks get blessed with Vibhuti and Shakti of Vishnu-lok. This is the fruit of pure knowledge, the Vedas.

Devotees just recite the Stuti shaloks with full faith and get blessed with the godly grace. For all those who wish to be blessed with such a grace, for them, there is no choice, but to recite these Shalokas with faith. Such readers may straight a way go to the text of the Stotram (chapter-4) and faithfully recite the same be blessed with godly grace of Goddess Mahalakshmi.

The conclusion of the studies comes to be that: Vibhuti and Shakti of the Vishnu-lok manifests at boundary or Vishnu-lok (real 5-space in the role of boundary) as well as Saptrishi-lok as stands released with unlocking of the seal of the origin of Vishnu-lok. This is there because of the Goddess Mahalakshmi, the consort of Lord Vishnu, manifesting as real 5-space playing the role of boundary of 6-space and dimensional order of 7-space.

This privileged state of Vibhuti and Shakti of Vishnu-lok is there because of the Goddess Mahalakshmi. This is the state whose comprehension and understanding has much education for us who are interested in sciences, mathematics and technology of higher real spaces, particularly as to how the continuity of manifestations is being maintained by the dimensional contents which otherwise remain sealed at the origins of the dimensional spaces.

The concept of release of higher dimensional content with unlocking of the seal of the origin and transcendence setting into action is the most fundamental concept, which is not known to the present day sciences and technologies. Four consecutive dimensional spaces manifest simultaneously as four-fold manifestation sequentially playing the roles of dimension, boundary, domain and origin with origin normally remaining in dormant sate but otherwise being capable of being initiative.

This in Vedic technological language would mean chiseling of an eye. In Yogic language it would mean attaining transcendence state for higher state of consciousness. This precisely in geometric language would mean the release of next higher dimensional space.

Though in the present study which aims to outline some of the steps for foundations of higher Vedic mathematics, an attempt is being made to make this study a self-contained one but despite every effort it has not become possible to go for defining each and every technical term used here and as such I feel that one reading of my book on "Vedic Geometry" may be of great help.

Before presenting the studies to the readers, I feel it my duty to express that this study simply would have been without shape, but for the enlightenment of Maharishi's Vedic mathematics' statement sharpened and focused by H.H.Maharishi Mahesh Yogiji Maharaj (as part of Maharishi's Absolute Theory of Defence). This has been annexed with the present studies to give the readers an idea as to what is going to be the final shape of things in the area of Vedic mathematics, and now wonderful worlds of higher dimensional Reality are awaiting for us.

Scholars may straight-a-way go to the Maharishi's Vedic Mathematics statement. The readers, who are not yet exposed to Vedic geometry and Vedic mathematics, may first go through chapter-3 of the present studies regarding "Structural Richness of a Cube". However, the readers who are already exposed to Vedic geometry and Vedic mathematics, they may start with chapter-1 titled "Steps for foundations of higher Vedic mathematics".

The reader who are interested to first to go through Om formulation, they may start with chapter-2 and the readers who are interested only in godly grace they may straight-a-way go to chapter-4 titled "Mahalakshmi-Ashtakam Stotram": Mahalakshmi Ashtakam Stotram blesses devotees reciting the scripture with faith.

With all humbleness, I share with the readers that my family has full faith in this scripture and everyone can be blessed with godly grace just by faithful recitation (three times a day) or Stuti Shaloks of Mahalakshmi Ashtakam Stotram.

Present study, in fact is a joint exercise of all the members of my family as every member has contributed for the completion of the work in his/her won way. Further I would like to share with the readers that the present studies have become possible only because of the privilege to be at the feet to H.H. Sri Sripad Babaji Maharaj and had initiations into the organisation of Vedic knowledge and further being at the feet of H.H. Maharishi Mahesh Yogiji Maharaj and learnt Transcendental Meditation for transcendence values needed for reciting at the inner folds of organisation formats of Vedic knowledge.

Mahalakshmi-Ashtakam Stotram text is a composition of just 818 letter organised as just 11 Shaloks and its recitation even by reading the text is an exercise of less than five minutes. By way of study of chapter-4: "Mahalakshmi-Ashtakam Stotram", it has been expressed about the organisation and composition of this scripture as that: The composition of this scripture as that: The composition range of 818 units is firstly organised as 352 syllables. These 352 syllables are further organised as 85 Padas (words). The Padas range of 85 units is organised as 22 composition ranges as half is organised as 22-composition range as half Shaloks of 16 syllables length. Ultimately these 22 composition ranges get organised as 11 Shaloks of 32 syllables each.

The organisation of individual Shaloks as 32 syllables of equal parts of 16 syllables is parallel to the organisation of 32 teeth in the mouth grouped as two jaws of 16 teeth each.

The human Nad had ultimately gets regulated through these 32 teeth arrangement as Shabad (Mantras). The organisation of Nad of 818 units of Mahalakshmi-Ashtakam Stotram is parallel to the organisation of the affine space of a cube of 818 units. This organisation is further parallel to the organisation range of Vedic mathematics text of precisely 818 units.

Therefore, the organisation of 818 units composition of Mahalkshmi Stotram satisfy the first test of being of the potentialities of the nature which ends up as our Triloki. As such, everything what may be attained within human frame is ensured with faithful recitation of Mahalakshmi-Ashtakam Stotram.

The physical test of the organisation possible on the affine space within a cube and the intellectual test of the organisation of the Vedic mathematics text having been done, the interested readers may further have the satisfaction of the subjective test by themselves experiencing the taste of the Stotram.

For such interested readers, it is added that they should have faithful recitation of the scripture three times a day, initially with the help of written text till the text become fully enlivened in their consciousness, it would become possible for them to dispense with the written text and they may enjoy the recitation of the scripture while sitting in Pada-Asan. Though the recitation as such may turn out to be just of one-minute

duration and even stage would reach where just attention would enliven the whole range of the text.

The blessed state of Mahalakshmi-Ashtakam Stotram getting enlivened just the moment there is attention to it becomes a permanent state provided one does not deviate from the laws of pure consciousness state which admits truth as its base/format for enlivened existence.

To achieve the enlivened state of existence may not be difficult but to make it a permanent state, one is to be ever truthful to oneself so that purity of consciousness is not diluted. If at any stage one feels that some circumstances of consciousness are having tendency to dilute the purity of consciousness, he should increase the number of recitations of this scripture to meet those uncalled for tendencies of those circumstances. Faithful recitation has the potentialities to overcome all such things."

This book "Foundations of Higher Vedic Mathematics" published by M/s. Arya Book Depot, has four chapters with split-up contents as:

1. Steps for foundations of Higher Vedic Mathematics

1.1 Introduction

1.2 Main results

1.3 Basic geometric formats and concepts

1.4 Vedic mathematics text

3. Structural richness of cube

3.1 Cube

3.2 Three space

3.3 Triloki and Lord Vishnu

3.4 Chasing Rigved organisation with cube

3.5 Chasing Vedic knowledge organisation with cube

3.6 Internal structure of a cube

3.7 Structural setups of a cube of edges as ten units

3.8 Bottlenecks of linear mathematics

3.9 Exposure to structural richness of cube

3.10 To arrive at a syllabi

3.11 For transition to course on hypercube-4

4. Mahalakshmi Ashtakam Stotram

4.1 Introduction

4.2 Text of the scripture

4.3 Text as composition of 818 letters

4.4 Shalokawise structural data

4.5 Gyan Vigyan Yog

My modest work "Patanjali Unison Discipline" is my first attempt as more in the spirits of a Sadhaka then in that of scholar, was blessed by my Guru His Holiness **Sri Sripad Babaji Maharaj**, with his forward:

"This Indian spiritual wisdom revealed first in and through the Vedas was well systematised and reconstructed in the six orthodox systems of Indian philosophy, namely Nayaha, Vaisesika Sankhya, Yoga, Mimasa and Vedanta. Based on scriptural authority and expounded by eminent Acaryas, these celebrated Darsanas ensure salavation to the serious aspirant. It is well known that philosophy in India has not been merely an intellectual enterprise, but a way of life. And herein lies the Sadhanatmaka character of Indian thinking.

It is against this background that the philosophy of Yoga should be understood. While recently there is a craze for Yoga, there is less seriousness for a correct apprehension of this spiritual science. An attempt at is oversimplification and devising shortcut is what is apparent here and there. In fact, Yoga is a mater of eternal inspiration for the Sadhakas. Hence, the relevance of the repeated and reneweded studies

of the basic texts of these great disciplines has dominated search of the truth since time immemorial.

In the context of such a huge and rich literature on the subject, as is amassed on Yoga to-date, it is indeed not any easy task to write a fresh commentary on the Yoga-sutras of Patanjali, which number 196, are an example of brevity and perfection with which ancient learning was preserved at the hands of Rishis.

Even an explanation of the aphoristic expression requires a mastery of the language, as well as a deeper insight into the field. While the size of the Yoga Sutras is not voluminous, it has been very rationally classified to present a scientific picture of spiritual ascent.

The first section, dealing with the nature and technique of Yoga is known as Samadhi Pada, since it is devoted to explain what the Yoga is. The second section has significantly been termed as Sadhana Pada, since it expounds the reasons for which one should adhere to the path of Yoga.

It aptly analyses the miseries of life from which liberation is sought, and it prescribes external preparatory disciplines, which attune the Sadhaka to Samadhi. The third section, called as Vibhuti Pada, lays down the internal Yogic techniques, which unfold the mysteries powers prior to attainment of Samadhi.

The last section is naturally Kalvlya Pada, which thoroughly deals with the basic philosophical doctrine involved in the Yogic conception of bondage and liberation.

Sri Sant Kumar Kapoor of the Haryana Civil Service (Judicial), Palwal, has done an humble service by writing the book titled "Patanjali Unison Discipline". His modest work is more in the spirit of a Sadhaka than in that of a scholar. He has attempted a simple explanation note for each Sutra of the Patanjali Yoga-Sutras. May God grant him further inspiration in this noble direction, as the Patanjali Yoga Darsana is to first taste the amrosia of yoga with the supreme, and then to reveal the experience. The lineage of Sadhakas as well as scholars has worked together on the Patanjali Yog Sutra from the ages to reveal and to experience the Yoga Sutras by their living evidence"

His Holiness Sri Sripad Babaji Maharaj saint of Vrindavan, the founder of Vraja Academy, Vrindavan blessed this work and made me His disciple emerging to His satisfaction of Mahewshwara Sutras for proper channelization of natural order on the transcendental format of Om as Udgiti of Parvanava, AUM, Onkar and Vashitakar of Absolute order of Veda:

"The revelation of Eternal wisdom has been the eternal quest -- the meeting point of alpha and omega in Indian School of Thought. Lord Krishna reveals this lineage in Bhagvad Gita as:

'I taught this immortal Yoga to Vivaswan (Sun-god):

Vivaswan conveyed it to Manu (his son); and Manu imparted it to (his son) Ikswaku' IV.1

The transmission of the light of knowledge from man to man and from age to age is handed down through the great ancillary of cosmic memory by the enlightened one to the seeker in quest. Whenever this link of interaction is broken the energy is stagnant and humanity stands at the crossroad. Symbolically, the churning of divine and demonic forces comes to the point of creating problems for right discrimination to decipher the Truth and find the right dimension of consciousness.

Since these ancient links are lost, intellectual attempts to regain them are being made since several decades. The present research work within the Vedic mathematical disciplines opens new horizons for modern science and inspires rational thinking to go back to the ancient metaphysical courses of the meeting point of thinghness and nothingness, which the great symbol reveal in the mantras and shruti, in the journey of consciousness of the Pauranic kathas and in the insight into the in-depth psyche of the Bhagavad-Gita.

Once again efforts are being made to provide a way to the rational scientist to link knowledge with the energy of an inscrutable faith, which can open in him the mystic eye or vision. The rejuvenation of this quest is deeply stressed and aims to arrive at a metamorphosis in the fields of eternal mathematics introduced here as the first of its kind.

Sri Sant Kumar Kapoor's quest – else engaged in the field of jurisprudence – has opened his intuitive faculty of study ancient scriptures

in the light of modern mathematics. These studies were brought to focus by His Holiness Swami Bharti Krisna Tirthaji Maharaj, the Sankracharya of Kanchi Peeth around 1965.

As the Shrutis of the Vedas sing in chorus; "He is full, this is full, if fullness if taken out of fullness there remains fullness", so the heart of the Rigveda concludes that our thoughts should be same, our actions should be same, there should be no diversity between them, that the fullness of thought, speech and action should meet at alpha and omega, at-one-ment. To unlock the intuitive forces and dynamic energies in quest of the churned out Ambrosia the universal syllable AUM is beginning and the end.

This research work is on its way to arrive at this very conclusion. May the Supreme Divine bless this venture."

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For further information interested readers may visit websites:

www.vedicganita.org

www.geocities.com/vedicmathematics

www.learn-and-teach-vedic-mathematics.com*****