

**Phase 5**  
**GEETA SATHAPATYA**  
**Geeta Text Geometric formats**

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**Phase 5.4**  
**Swastik Sathapatya**  
**(स्वास्तिक स्थापत्य)**  
(Geometric base of creative dimensional frame)

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**Phase 5**  
**GEETA SATHAPATYA**  
Geeta Text Geometric formats

**Phase 5.4**  
**Swastik Sathapatya**  
**(स्वास्तिक स्थापत्य)**  
**(Geometric base of creative dimensional frame)**

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**Ved Ratan**

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**Abstract**

Vedic knowledge systems accept spatial order 4-space as the Creator's space. Dimensional space set up of quadruple spatial dimensions is the creative dimensional frame of 6-space (self referral) domain. Printout of creative dimensional frame in 2-space is Swastik (卐). This is geometrically a print out as a set up of quadruple quarter squares in a square. Each quarter square, as 2-space / spatial set up is of value '2'. Together quadruple quarters value sums up '8' and '16' as multiplicative value, as value of creative dimensional frame value within spatial order as surface (2-space) is of a pair of phases, as such Swastik set up is also of opposite orientation along pair of faces. Between a pair of faces of surface is a 3-space content in its zero value state. It is churning in terms of a pair of Swastiks in their opposite orientations, which sequentially churns out a solid (3-space) dimensional frame) of transcendental (5-space). Hyper cube 5, the representative regular body of 5-space is of (3, 4, 5, 6) = 18 values set up which in its zero state makes TCV (शून्य) Sunya / zero = 18. 5-space content spectra is of value (5, 3, 3, 1) = 12. The values pair (12, 18) is parallel with (6, 2, 6, 3) and as such goes parallel with (2, 3) as in both cases there is common multiplier (1 ½) which becomes transition multiplier for transition from spatial order to solid order.

**1. Creative Dimensional frame**

Creative dimensional frame is the spatial order set up of quadruple spatial dimensions. It is of value  $2^4 = 16$ , which is parallel with the spectra of 6-space content (6, 4, 4, 2). Being a spectra of 6-space content, the creative dimensional frame is of potentiality of reach uptill 6-space



## 2. Formulation Swastik and Sathapatya

Formulation Swastik (स्वास्तिक) is of ten folds :

1, 4, 8, 22, 53, 182, 90, 76, 190, 402, together of summation value 1027.

Formulation Sathapatya (स्थापत्य) is of ten folds :

1, 3, 8, 22, 70, 182, 90, 72, 190, 402 together of summation value 1040.

The formulation Swastik is of value '13' less than the value of formulation Sathapatya.

The difference value 13 is parallel with TCV (सूर्य) / Sun = 13. It is also parallel with TCV (गीता) = 13.

## 3. Manifestation within Paramvihom

Transcendental space (परमवियोम् paramvihom) = 44. Value 44 accepts organization as 36 + 8.

Value 36 = 1 + 2 + 3 + 4 + 5 + 6 + 7 + 8 and Value 8 = 1 + 1 + 1 + 1 + 1 + 1 + 1 + 1.

Value 44 is also of organization 44 = 26 + 18.

Value 26 is parallel with summation value of four folds (5, 6, 7, 8) of hyper cube 7, the representative regular body of 7-space while value 18 is the summation value of four folds (3, 4, 5, 6) of hyper cube 5, the representative regular body of 5-space.

Value triple (5, 6, 7) is of summation value 18. The values triple (5, 6, 7) is also of 5 x 7 grid of 35 double digit number of 6 place value system.

<p style="text-align: center;"><b>5 x 7 grid</b></p>	<p><b>Double digit numbers</b></p> <table border="1"> <tr><td>01</td><td>02</td><td>03</td><td>04</td><td>05</td></tr> <tr><td>10</td><td>11</td><td>12</td><td>13</td><td>14</td></tr> <tr><td>15</td><td>20</td><td>21</td><td>22</td><td>23</td></tr> <tr><td>24</td><td>25</td><td>30</td><td>31</td><td>32</td></tr> <tr><td>33</td><td>34</td><td>35</td><td>40</td><td>41</td></tr> <tr><td>42</td><td>43</td><td>44</td><td>45</td><td>50</td></tr> <tr><td>51</td><td>52</td><td>53</td><td>54</td><td>55</td></tr> <tr><td></td><td></td><td></td><td></td><td>100</td></tr> </table>	01	02	03	04	05	10	11	12	13	14	15	20	21	22	23	24	25	30	31	32	33	34	35	40	41	42	43	44	45	50	51	52	53	54	55					100
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Manifestation within transcendental (परमवियोम् paramvihom) space as (26, 18) is parallel with organization of 18 infinite series of finite group and 26 sporadic groups.

#### 4. Geometric base of 18 infinite series

Value 18 = TCV (शून्य Sunya / zero) = 18 becomes a specific feature of manifestation within 4-space as of range 0 to 17. This further makes an organization as of (-8, -7, -6, -5, -4, -3, -2, -1, 0, 1, 2, 3, 4, 5, 6, 7, 8).

The series of synthesis of dimensional axis of order 0 to 17 make 18 infinite series, sequentially of single, double, triple, quadruple, penta and so on of n number of dimensions as under :-

-9	-7	6	30	65	111	168	226	315		
-8	-6	6	28	60	102	154	206	288		
-7	-5	6	26	55	93	140	196	261		
-6	-4	6	24	50	84	126	176	234		
-5	-3	6	22	45	75	112	156	207		
-4	-2	6	20	40	66	98	136	180		
-3	-1	6	18	35	57	84	116	153		
-2	0	6	16	30	48	70	96	126		
-1	1	6	14	25	39	56	76	99		
0	2	6	12	20	30	42	56	72		
Order uptill infinity)	single	double	triple	quadruple	penta	hexa	hepta	octa	-----	---- Nth (
0	2	6	12	20	30	42	56	72	-----	----
1	3	6	10	15	21	28	36	45	-----	----
2	4	6	8	10	12	14	16	18	-----	----
3	5	6	6	5	3	0	-4	-9	-----	----
4	6	6	4	0	-6	-14	-24	-36	-----	----

5	7	6	2	-5	-15	-28	-44	-63	----	----
6	8	6	0	-10	-24	-42	-64	-90	----	----
7	9	6	-2	-15	-33	-56	-84	-117	----	----
8	10	6	-4	-20	-42	-70	-104	-141	----	----

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9	11	6	-6	-25	-51	-84	-124	-168	----	----
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## 5. Geometric format of 26 sporadic groups

Value 26 is parallel with TCV (देवता devta) = 26.

Value 26 is of geometric format (5, 6, 7, 8) of hyper cube 7.

Values (5, 6, 7, 8) as (5-space, 6-space, 7-space, 8-space) are of dimensional format (3-space, 4-space, 5-space, 6-space).

### 5.1 Synthesis of solid (3 space) order dimensions

Solid (3-space) dimensional frame is a set up of triple linear dimensions (1, 1, 1) which sequentially as single, double and triple linear dimensions are of sequential synthesis values (3, 5, 6).

These triple synthesis values of solid dimension, as 5 solid dimensions frame of 5-space, lead to the set up of synthesis values of single, double, triple, quadruple and penta number of 5-space dimensional frame and are sequentially of values (15, 10, 5, 0) for four such dimensions.

However, as within 4-space  $4 = 2 + 2 = 2 \times 2 = (-2) \times (-2)$  opposite orientations super imposed and as such the set up of five dimension becomes a set up of (-2, -1, 0, 1, 2) parallel with five signatures geometries of 2-space. Along this format, five transcendental dimensions of 7-space make a set up of (30, 25, 20, 15, 10).

### 5.2 Synthesis of creative (4 space) order dimensions

Creative (4-space) dimensional frame is a set up of quadruple spatial dimensions (2, 2, 2, 2) which sequentially as single, double, triple and quadruple spatial dimensions are of sequential synthesis values (2, 4, 6, 8).

These quadruple synthesis values of creative dimensions, as 6 creative dimensions frame of 6-space, lead to the set up of synthesis values of single, double, triple, quadruple, penta and hexa number of 6-space dimensional frame and are sequentially of values (21, 12, 3, -6, -15, -24) for six such dimensions.

However, as within 4-space  $4 = 2 + 2 = 2 \times 2 = (-2) \times (-2)$  opposite orientations super imposed and as such the set up of six dimension becomes a set up of (-3, -2, -1, (0), 1, 2, 3) parallel with five signatures geometries of 2-space. Along this format, six transcendental dimensions of 8-space make a set up of values (48, 39, 30, 21, 12, 3).

### **5.3 Synthesis of transcendental (5 space) order dimensions**

Transcendental (5-space) dimensional frame is a set up of penta solid dimensions (3, 3, 3, 3, 3) which sequentially as single, double, triple, quadruple, penta solid dimensions are of sequential synthesis values (3, 5, 6, 6, 5).

These penta synthesis values of transcendental dimensions, as 7 transcendental dimensions frame of 7-space, lead to the set up of synthesis values of single, double, triple, quadruple, penta, hexa and hepta number of 7-space dimensional frame and are sequentially of values (28, 14, 0, -14, -28, -42, -56) for seven such dimensions.

However, as within 4-space  $4 = 2 + 2 = 2 \times 2 = (-2) \times (-2)$  opposite orientations super imposed and as such the set up of seven dimension becomes a set up of (-3, -2, -1, 0, 1, 2, 3) parallel with seven signatures geometries of 3-space. Along this format, seven transcendental dimensions of 9-space make a set up of values (45, 27, 9, -9, -27, -45, -63). The same with super imposition of orientations will transform as (45, 27, 9, 9, 27, 45, 63).

### **5.4 Synthesis of self referral (6 space) order dimensions**

Self referral (6-space) dimensional frame is a set up of hexa creative dimensions (4, 4, 4, 4, 4, 4) which sequentially as single, double, triple, quadruple, penta, hexa creative dimensions are of sequential synthesis values (4, 6, 6, 4, 0, -6). However, the same, with super imposition of orientations within creative space will make a set up of (4, 6, 6, 4, 0, 6).

These hexa synthesis values of self referral dimensions, as 7 transcendental dimensions frame of 8-space, lead to the set up of synthesis values of single, double, triple, quadruple, penta, hexa, hepta and octa number of 8-space dimensional frame and are sequentially of values (36, 16, -4, -24, -44, -64, -84) for eight such dimensions.

However, as within 4-space  $4 = 2 + 2 = 2 \times 2 = (-2) \times (-2)$  opposite orientations super imposed and as such the set up of eight dimension becomes a set up of (-4, -3, -2, -1, (0) 1, 2, 3, 4) parallel with eight positive and negative signatures geometries of 4-space. Along this format, eight transcendental dimensions of 10-space make a set up of values (55, 35, 15, -5, -25, -45, -65, -85). The same with super imposition of orientations will transform as (55, 35, 15, 5, 25, 45, 65, 85).

## 6. Set up of 26 sporadic groups

This set up is of triple linear (1-space) axis for all '5' solid (3-space) dimensions of 5-space, quadruple spatial (2-space) axis for all '6' creative (4-space) dimensions of 6-space, penta solid (3-space) axes of all '7' transcendental (5-space) dimensions and hexa creative (4-space) axes of all eight self referral (6-space) dimensions of 8-space.

## 7. Superimposition of opposite orientations

Within 4-space there happens super imposition of opposite orientations for the 'axis'. 4-space itself is creative dimension of 6-space. But value 6 and value (-6) are of features

$$(i) 1 + 2 + 3 = 1 \times 2 \times 3 = 6$$

$$(ii) (-1) + (-2) + (-3) = (-1) \times (-2) \times (-3) = -6$$

$$\text{While } 4 = 2 + 2 = 2 \times 2 = (-2) \times (-2)$$

It is because of it that creative (4-space) dimensions creates a synthetic manifestation set up of 6-space of opposite orientation. As such 6-space dimensional frame uptill dimension of dimension phase is of value  $6 \times 4 \times 2 = 48$  which is approached as  $48 = 24 + 24$ , i.e. only one of the two parts of manifestation are chased and second part is reached at as per the opposite orientation of the first part. It is this (half, half) processing format, which is unique of the creators (4-space) of spatial order. This amounts to working with half unit along with full unit. Practically it becomes a mathematics of

‘2 as 1’ and ‘1 as 2’. This as led to one / एक ek of TCV 8. It is parallel with the set up of cube as 8 sub cubes. It helps comprehend as to the geometric format of triple dimensional frames of half dimensions embedded in eight corner points of a cube.

## 8. Formulations pair (यम, मय) / yama / maya)

Formulations of equal TCV values for all ten folds accept distinguishing features as of formats of approach to middle from opposite ends, mathematically as the maxima and minima reach. Illustratively formulation (यम, / yama) as well as formulation Formulations pair (मय) / maya) are of ten folds values being (1, 2, 4, 12, 30, 92, 41, 40, 80, 172).

(यम, / yama) letters of Devnagri alphabet and (मय) / maya) who was imparted knowledge by Surya are the conceptual formulations, for whose comprehension, one is to appreciate the feature of super imposition of opposite orientations of creative dimensional order of Surya / Sun (6-space) set up.

## 9. Swastik Ganit Sathapatya (स्वास्तिक गणित स्थापत्य)

Geometric format of Swastik mathematics helps transcend through the linear order mathematics which approaches ‘1 as 1’ while spatial order mathematics accepts ‘2 as 1’ and ‘1 as 2’ leading to ‘half as a working unit’. To transcend through the mathematical knots of linear order and to reach at proofs of mathematical problems like ‘Goldbach Theorem’, one is to apply the spatial order tools. As illustrative demonstration, hereunder is reproduced the proof of Goldbach Theorem reached at by the Author as published in the Vedic Mathematics Newsletter Issue no 10 of 2000-07.

<https://www.vedicmaths.org/2000-newsletter-index/10-proof-of-goldbach-s-conjecture>

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VEDIC MATHEMATICS NEWSLETTER

ISSUE No. 10

Vedic Mathematics is becoming increasingly popular as more and more people are introduced to the beautifully unified and easy Vedic methods. The purpose of this Newsletter is to provide information about developments in education and research and books, articles, courses, talks



etc., and also to bring together those working with Vedic Mathematics. If you are working with Vedic Mathematics- teaching it or doing research- please contact us and let us include you and some description of your work in the Newsletter. Perhaps you would like to submit an article for inclusion in a later issue.

If you are learning Vedic Maths, let us know how you are getting on and what you think of this system.

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This issue's article:

### PROOF OF GOLDBACH'S CONJECTURE

We are delighted to include an attachment with this Newsletter which contains a [proof](#), according to Dr S K Kapoor who devised it, of Goldbach's Conjecture: that every even number over two can be expressed as the sum of two primes. The experts in number theory will soon tell us about the validity of Dr Kapoor's proof, which is neat and does not require very advanced mathematics to understand. This is contained in Dr Kapoor's book "Goldbach Theorem" ISBN 81-7063-113-0 and steps are being taken to have it published in a reputable journal.

Christian Goldbach (1690-1764) was born in Prussia and became professor of mathematics and historian of the Imperial Academy at St. Petersburg. He later tutored Tsar Peter II. In his famous letter to the great Swiss mathematician Leonhard Euler dated June 7th 1742 he conjectures that every number that is a sum of two primes can be written as a sum of "as many primes as one wants". Goldbach considered 1 to be a prime number. In the margin of this letter he states his famous conjecture that every number is a sum of three prime numbers and this is equivalent to what is now known as Goldbach's Conjecture: that every even number can be expressed as the sum of two prime numbers. So for example,  $30 = 7+23$ , where 30 is even and 7 and 23 are both prime. As  $30 = 11+19$  as well, we see that there is more than one way to express this number as a sum of primes.

In fact Dr Kapoor's research suggests that the number of ways of expressing the even number, E, as a sum of primes is equal to at least the square root of E divided by 4. So for E=400 there will be at least 5 ways of partitioning the number 400 into a sum of two primes. The proof follows

from this result for E greater than or equal to 64, and the even numbers from 2 to 62 are easily checked.

Dr Kapoor has a first class degree in Mathematics and a Ph.D. in Vedic Mathematics. He was reading The Hindustan Times, Delhi dated March 25, 2000 in which there was an editorial item "From Zero to Infinity" focusing on the challenge of Goldbach's Conjecture. "Straightaway it flashed to me" says Dr Kapoor in the Preface of his book "that the format beneath the requirement of the conjecture  $E=p+q$  is that of di-monad and by that very evening the proof was mentally captured". Thus Dr Kapoor used the results of his research in Vedic Mathematics to arrive at the proof. In answer to a question about the use of Vedic Mathematics in the proof" Dr Kapoor replied "As far as your query as to the actual use of VEDIC MATHEMATICS for settlement of the PROOF, the straight answer to it is 'YES'; in fact, it is Vedic Mathematics, or to be specific, Vedic Geometry, and amongst that discipline, the concept of di-monad, a spatial order of manifested layers of dimensional spaces, has supplied the whole format, structural logic and the steps." And he went on to elaborate.

To promote the book "Uncle Petros and Goldbach's Conjecture" by Apostolos Doxiadis, the publishers, Faber and Faber, have put up an award of one million dollars to the first person who can supply a proof of Goldbach's Conjecture within two years. This book revolves around a character, Uncle Petros, who devoted his life to finding a proof of Goldbach's Conjecture and is worth reading. It is interesting to note that Prof. Goldbach himself would not have been able to claim this award if he were alive today and had a proof, as under the rules the award can only go to a resident of the US or the UK! The same applies to Dr Kapoor who lives in India.

The number  $2^{100}$  (two to the power of one hundred) is cited in the Uncle Petros book and it is an interesting challenge to show that this number has at least  $2^{48}$  ways (remember: square root of E divided by 4) of being partitioned into a sum of two primes.  $2^{100}$  is rather a large number however and has rather a lot of prime pairs. But if you can help with this task we or Dr Kapoor (santk@rediffmail.com) would be very glad to hear from you.

More information about Dr Kapoor and his book can be seen at our web site.

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## STATEMENT

*"Every Even number greater than two can be written as a sum of a pair of primes."*

## PROOF

### Step 1.

Let Even  $E = M+M$ .

We can construct a set  $D(1) =$

$$\left[ \begin{pmatrix} 0 \\ 2M \end{pmatrix} \begin{pmatrix} 1 \\ 2M-1 \end{pmatrix} \begin{pmatrix} 2 \\ 2M-2 \end{pmatrix} \dots \begin{pmatrix} M \\ M \end{pmatrix} \right]$$

We can designate the members of  $D(1)$  as duplexes and can have abbreviation for each member as  $d_r$  where  $r = 0$  to  $M$  and as such, cardinality of  $D(1) = M+1 > M = E/2$ .

$D(1)$  is the largest possible set from which we have to sort out at least a single  $d_r$  such that both  $r$  and  $2M-r$  are primes to satisfy the conjecture.

For this, impliedly, we have to rule out all values of  $r$  and  $2M-r$  where  $r$  or  $2M-r$  are composites. Let us formally define  $d_r$  composite when either  $r$  or  $2M-r$  is composite. Therefore, the whole exercise as such reduces to sorting out composites from the range of  $0$  to  $M$  as well as from  $M$  to  $2M$  and finally to see if there exists any  $d_r$  which is not a composite.

For this, we have to construct a chain of subsets of  $D(1)$  such that  $D(2)$  contains only those  $d_r$ 's where  $2$  is not a factor of  $r$  or  $2M-r$  and then to have subset  $D(3)$  of  $D(2)$  such that for no member  $d_r$  of  $D(3)$ ,  $3$  is a factor of  $r$  or  $2M-r$ , and so on.

Let us first of all construct a subset  $D(2)$  of  $D(1)$  such that  $D(2) = \{d_r \mid r = \text{odd} \leq M\}$ .

Therefore, cardinality of  $D(2)$  shall be  $\geq E/4$ .

### Step 2.

Before, we construct further subsets and count their cardinalities, let us first of all see the following properties of number which may be availed for the purpose:

a. Let  $E = \sqrt{E} \times \sqrt{E} = A \times B$ .

If  $A < \sqrt{E}$ , then  $B > \sqrt{E}$ .

Therefore, in terms of primes  $\leq \sqrt{E}$ , we can sort out composites upto  $E$ .

b. Let  $P = \{p_1, p_2, p_3, \dots, p_u\}$  be the set of all odd primes  $\leq \sqrt{E}$  such that  $p_k < p_{k+1}$  for  $k=1$  to  $u$ .

Let  $N$  is largest odd natural number  $\leq \sqrt{E}$ . Therefore,  $1/\sqrt{E} < 1/N$ .

Further, as:

$$1/N = 1/3 \times 3/5 \times 5/7 \times 7/9 \dots (N-2)/N.$$

Therefore, if we restrict the denominators  $(2m+1)$ 's of above fractions of the form  $(2m-1)/(2m+1)$  only to  $(2m+1)$  as a prime, then

$$1/N < 1/3 \times 3/5 \times 5/7 \times 9/11 \times \dots (p_u-2)/p_u, \text{ as } p_u \text{ is the largest prime } \leq \sqrt{E}.$$

Therefore,

$$\begin{aligned} 1/\sqrt{E} &< 1/N \\ &< 1/p_u = 1/3 \times 3/5 \times 5/7 \times 9/11 \times \dots (p_u-2)/p_u. \end{aligned}$$

### Step 2A.

Rule "one more than the previous one" gives us a natural number array which takes  $E$  steps upto  $E$  as  $1, 2, 3, \dots, E$ .

Rule "proportionately" permits us to cover as a table of  $p$  upto  $E$  only as  $E/p$  steps as  $p, 2p, 3p, \dots, p \times p$ .

Taking  $p_r$  as  $(r)$ th prime and  $p_{r+1}$  as  $(r+1)$ th prime,  $r > 2$ , as such, both odds, shall be expressible as

$$p_{r+1} = p_r + 2s \text{ for suitable whole number } s \text{ and } p_{r+1} \leq \sqrt{E}.$$

Now, taking  $A(1)$  as array of whole numbers;  $A(2)$  as  $A(1)$  except multiples of 2;  $A(3)$  as  $A(2)$  except multiples of 3; and so on,  $A(p_{r+1})$  as  $A(p_r)$  except multiples of  $p_{r+1}$  shall be permitting us to reach at the cardinality of  $A(p_{r+1})$  with the help of the cardinality of  $A(p_r)$  as:

1. Total multiples of  $p_{r+1}$  upto  $E$  are  $E/p_{r+1}$ .
2. Multiples of  $p_{r+1}$  = odd multiples of  $p_{r+1}$  + even multiples of  $p_{r+1}$ .
3. Even multiples of  $p_{r+1}$  would be multiples of 2 and as such would be ruled out from  $A(1)$ .
4. Therefore, at the most, only odd multiples of  $p_{r+1}$  i.e.  $\frac{1}{2} \times E/p_{r+1}$  would remain to be ruled out from  $A(p_r)$ .
5. Taking cardinality of  $A(p_r) \geq E/p_r$ , the cardinality after accounting for  $\frac{1}{2} \times E/p_{r+1}$  i.e. odd multiples of  $p_{r+1}$ , we shall be left with  $E/p_r - \frac{1}{2} \times E/p_{r+1} \geq \frac{1}{2} \times E/p_{r+1}$
6. The number  $\frac{1}{2} \times E/p_{r+1}$  gives us  $\frac{1}{4} \times E/p_{r+1}$  pairs (duplexes).
7. Now, from here  $\frac{1}{4} \times E/p_{r+1}$  pairs (duplexes), to be back to the array of whole numbers, first we have to straighten two arrays of duplexes from  $(1, 2M-1), (3, 2M-3), \dots, (M, M)$  to a single array amongst  $(1, 3, 5, 7, \dots, 2M-7, 2M-5, 2M-3, 2M-1)$  and then as a second step we shall be going from above odds' array to the whole numbers  $(1, 2, 3, 4, 5, \dots, 2M)$ . This as such, in first step would take us from  $\frac{1}{4} \times E/p_{r+1}$  pairs to  $\frac{1}{2} \times E/p_{r+1}$  odds (singles) to  $E/p_{r+1}$  to complete sequence of whole numbers (odds as well as evens).
8. With this, we can say we have reached from  $A(p_r)$  of cardinality  $E/p_r$  to  $A(p_{r+1})$  with  $E/p_{r+1}$  as cardinality.
9. The odds pairs of  $E/p_r = \frac{1}{4} \times E/p_r$  to odds pairs of  $E/p_{r+1} = \frac{1}{4} \times E/p_{r+1}$  gives us a multiplier  $(p_{r+1}-2)/p_{r+1}$  which takes us from  $\frac{1}{4} \times E/p_r$  to  $\frac{1}{4} \times E/p_{r+1}$  as that  $E/4(p_{r+1}) = (p_{r+1}-2)/p_{r+1} \times E/4p_r$ .

Hence we can apply the above multiplier i.e.  $(p_{r+1}-2)/p_{r+1}$  and sequentially can cover upto the largest prime  $\leq \sqrt{E}$ .

### Step 3.

Let us construct a subset  $D(3) = D_1$  (a subset of set  $D(2)$  where we are sorting out and cancelling  $d_r$ 's of  $D(2)$  for which either  $r$  or  $2M-r$  is composite with  $p_1$  (first odd prime i.e. 3) as a factor).

We can write  $M = 3Q+R$  where  $Q$  is quotient and  $R$  is remainder obtained of division of  $M$  by 3. Therefore the composites of the range 0 to  $M$  with 3 as factor would be  $Q-1$ . In fact, there are  $Q$  numbers which would be having 3 as a factor. But as 3 is divisible by 3 but is not a composite, therefore, the balance numbers would be  $Q-1$ . On the other hand  $2M=3(2Q)+2R$  would imply that  $2R$  may be greater than 3 and as such the total numbers of the entire range 0 to  $2M$  which may have 3 as a factor may be  $2Q+1$  but as this quotient  $2Q+1$  includes 3 also, therefore, the composite numbers would remain  $(2Q+1)-1 = 2Q$ .

Therefore, the maximum numbers upto  $2M$  which may have 3 as a factor and as such would be composites would be  $2/3$  of  $2M$ . As such, the cardinality of the set which would remain after cancelling composites with 3 as a factor would be  $(3-2)/3$  i.e.  $1/3$ .

As such, the cardinality of subset  $D(3) = D_1$  would be not less than  $(3-2)/3$  of cardinality of  $D(2)$  i.e.  $\geq 1/3 \times E/4$ .

At a next step, the cardinality of subset  $D(4) = D_2$  after cancelling out the composites with second odd prime i.e. 5 as a factor would be  $\geq (5-2)/5 \times 1/3 \times E/4$  i.e.  $3/5 \times 1/3 \times E/4$ .

Sequentially, we may proceed upto the largest odd prime  $p_u \leq \sqrt{E}$  and shall be having cardinality of  $D_u$ , after cancelling out the composites with all odd primes as

$$\geq (p_u-2)/p_u \times (p_{u-1}-2)/p_{u-1} \times \dots \times 3/5 \times 1/3 \times E/4$$

$$\geq 1/3 \times 3/5 \times 5/7 \times 7/9 \dots (N-2)/N \times E/4$$

$$\geq 1/N \times E/4$$

$$\geq 1/\sqrt{E} \times E/4$$

$$\geq \sqrt{E}/4 \geq 2 \text{ for } E \geq 64$$

$E=p+q$  for  $E$  Even  $\leq 64$  can be physically tested on the lines:

4=2+2	6=3+3	8=3+5	10=5+5
12=5+7	14=7+7	16=5+11	18=5+13
20=7+13	22=11+11	24=11+13	26=13+13
28=5+23	30=7+23	32=3+29	34=5+29
36=7+29	38=19+19	40=17+23	42=19+23
44=13+31	46=23+23	48=17+31	50=3+47
52=23+29	54=23+31	56=3+53	58=29+29
60=43+17	62=31+31	64=3+61.	

With this, the proof of the truth of the conjecture is complete.

**Q.E.D.**

## **Conclusion**

Conceptually, the mathematics of spatial order is of different values and its tools help transcend through the limitations of linear order. For to be parallel with Vedic knowledge systems, one is to be parallel with the Swastik Mathematics Sathapatya which avails 'half as a working unit'.

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