

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

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COMPACTIFIED RANGE OF ORIGINS

This day the course focus is upon 'Compactified range of origins'. It four folds aspects being taken up are as follows:

- 49. Sathapatya measuring rod.
- 50. Compactified range of origins.
- 51. Transcendence within self-referral domain.
- 52. Formulation 'Eka-Adhikena'.

The values being covered are to be taught as lessons numbers 49 to 52 to the students of 6-space Vedic Mathematics, Science & Technology.

LESSON-49

SATHAPATYA MEASURING ROD

- 1. Sathapatya measuring rod is a synthetic set up of hyper cubes 1 to 6.
- 2. Hyper cube format is a four folds format of dimension fold, boundary fold, domain and origin fold.
- 3. Space contents of four consecutive dimensional spaces (N space, $N+1$ space, $N+2$ space, $N+3$ space) together simultaneously manifests as N space dimension fold,

N+1 space boundary fold, N+2 space domain fold and N+3 space origin fold of hyper cube (N+2).

4. As the space content manifests domain fold and same as in a manifested state of a domain fold, plays different role, as such the domain fold becomes the dominating feature of hyper cube and accordingly hyper cube is recognized in terms of its domain fold.
5. One may have a pause here and take note that hyper cube of four folds (N-space as dimension, N+1 space boundary, N+2 space domain and N+3 space origin) is being designated as hyper cube N+2 as N+2 space as content as manifesting as domain fold here.
6. It would be a blissful exercise to re-visit hyper cubes 1, 2, 3, 4, 5 and 6 in terms of their respect four folds with 1-space content manifesting as domain fold of hyper cube 1, 2-space content manifesting as domain fold of hyper cube 2, 3-space content manifesting as domain fold of hyper cube 3, 4-space content manifesting as domain fold of hyper cube 4, 5-space content manifesting as domain fold of hyper cube 5 and 6-space content manifesting as domain fold of hyper cube 6.
7. It would further be a blissful exercise to take note that as each space content manifests as domain fold and the domain fold plays four distinct roles as dimensional fold, boundary fold, domain fold and origin fold, as such space content of (1, 2, 3, 4, 5, 6) space shall be leading to as many as $6 \times 4 = 24$ distinct roles their off.
8. One may further have a pause here and take note that transcendence take place at the origin fold and the four folds manifestation layer gets extended into a five folds transcendence range, and further as that the five folds transcendence range as well accepts extension into 6 fold

self-referral range, as such hyper cubes 1 to 6 shall be leading to self-referral ranges in respect of each of the 6 hyper cube format which as a result leading us to as many as $6 \times 6 = 36$ folds set up.

9. It would be a blissful exercise to chase above $6 \times 6 = 36$ folds set up as permits organization along 6×6 grid with each row and each column being the expression of a self-referral range:

1	2	3	4	5	6
2	3	4	5	6	7
3	4	5	6	7	8
4	5	6	7	8	9
5	6	7	8	9	10
6	7	8	9	10	11

10. Let us have revisit above organization.
11. First row (1, 2, 3, 4, 5, 6) has parallel to it a self-referral range of (1-space as dimension fold, 2-space as boundary fold, 3-space as domain fold, 4-space as origin fold, 5-space as base fold and 6-space as format fold).
12. Likewise is the set up for first column.
13. The second row and second column as ranges (2, 3, 4, 5, 6, 7) are having parallel organization of 2-space as dimension fold, 3-space as boundary fold, 4-space as domain fold, 5-space as origin fold, 6-space as base fold and 7-space format fold.
14. One may have a pause here and take note that first row self-referral range is of a linear order, while the second row self-referral range is of a spatial order.
15. Likewise 3rd, 4th, 5th and 6 rows and columns are the formats of solid, creative, transcendental and self-referral orders self-referral ranges.

16. Of these, 6 distinct roles of 6-space accepts organization along the north east diagonal of above 6x6 grid organization.
17. It would be a blissful exercise to glimpse and to chase and to imbibe the structural relationship of 6-space with other spaces in the respective roles of which 6-space itself is playing one of the role say as of 6-space dimensional fold, 6-space boundary fold, 6-space domain fold, 6-space origin fold, 6-space base fold and 6-space format fold.
18. It would be blissful to glimpse and to imbibe the role of 6-space as format fold of linear order self-referral range and likewise to be glimpsed and to imbibed the other roles of 6-space of spatial, solid, creative, transcendental and self-referral order self-referral ranges.
19. It would further be blissful to glimpse and to chase and to imbibe manifestation for 6-space content in the roles of dimensional fold, boundary fold, domain fold, origin fold, base fold and format fold.
20. As dimensional fold, there would be a manifestation a self-referral dimensional frame of 8 dimensions.
21. As a boundary fold, there would be a manifestation of a self-referral boundary of 14 components.
22. As a domain fold, there would be a re-manifestation of 6-space domain within a 6-space domain.
23. As 6-space origin fold, its creative dimensional order shall be carrying solid dimensional order of transcendental domain up-till base fold of transcendental order.
24. 6-space as base fold, shall be leading to upward transcendence and its creative dimensional order shall be

carrying the solid order of transcendental origin for its reach within the creative domain.

25. 6-space as format fold, shall be sustaining base fold and shall be supporting the reverse transcendence from the base fold through origin fold into the domain fold.
26. Sadhakas fulfilled with intensity of urge to know and to explore further the pure and applied values of above features of Sathapatya measuring rod for chase of self-referral domain (6-space domain) and parallel to it the mathematical values and processing systems of 6-space mathematics, shall visit and revisit above feature and values of Sathapatya measuring rod individually and collectively for each constitution of Sathapatya measuring rod, individually as well as collectively as entire Sathapatya measuring rod.
27. One shall further glimpse and imbibe the parallel format of Sathapatya measuring rod as well as of shad chakra format of human frame, artifices of numbers range 1 to 6, 6 steps long range of 'earth, water, fire, air, space and sun', as well.
28. One shall visit again and to glimpse and imbibe the organization features and values of 36 folds set up along 6x6 grid to have comprehensive view of the role of Sathapatya measuring rod in chase of 6-space domain and parallel to it of 6-space mathematics domain.



LESSON-50

COMPACTIFIED RANGE OF ORIGINS

1. Self-referral domain permits extension of transcendence ranges into self-referral ranges, as a step ahead of

transcendental domain permitting extension of four folds manifestation layers into five folds transcendence ranges as the origin folds are in a compactified state and this range sequentially unfolds, step by step.

2. This feature of manifestation for origins as a compactified range is their because of origin fold being of a higher dimensional order than that of domain fold.
3. The sequential unfolding of the origins range during transcendence of the order of the domain fold permits chase along the Sathapatya measuring rod format.
4. 4-space as origin of 3-space permits transcendence with the linear order of domain fold availing the format of spatial order of origin and their by there happen to a reach up-till solid order of transcendental base.
5. A step ahead, spatial order of 4-space domain avails solid order of transcendental origin as a format path for reach up-till self-referral base of creative order.
6. One shall glimpse and imbibe this transcendence phenomenon and consequential unfolding of compactified origins by chasing it along the format of Sathapatya measuring rod.
7. One may have a pause here and take note that the transcendence phenomenon is taking us up-till the dimensional order of the domain permitting to carried by the dimensional order of the origin for reach up-till the base fold whose order is parallel to the features of the domain fold itself.
8. For the facility of one's evaluation of one's comprehension of the feature and values of above phenomenon, tabulation is being made under:
- 9.

S	Domain	Order	Origin	Order of	Order
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.No		of Domain		Origin	of base
1	-	-	-	-	-
2	-	-	-	-	-
3	3	1	4	2	3
4	4	2	5	3	4
5	5	3	6	4	5
6	6	4	7	5	6
7	7	5	8	6	7

10. It would be a blissful exercise to chase transcendence and consequential sequential unfolding of compactified origins along the format of Sathapatya measuring rod which itself is a sequential synthetic set up parallel to the values range (1, 2, 3, 4, 5, 6).
11. As each space as a role to play as an origin, as such transcendence at the origin of each of hyper cubes there is to happen, a transcendence and consequential unfolding origin compactified there.
12. It would be blissful to glimpse and to imbibe and to chase of transcendence at the origin of hyper cube 1, 2, 3, 4, 5, 6 of Sathapatya measuring rod and to have chase for each of these 6 streams of transcendence in terms of format of Sathapatya measuring rod itself.
13. It would be very blissful to glimpse and to imbibe and to have a chase of this phenomenon of 6 stream of transcendence at origins of hyper cubes 1 to 6 permitting in each case having chase in terms of Sathapatya measuring rod itself, and the whole of this phenomenon

being the phenomenon happening within the self-referral domain (6-space domain) itself.

14. One shall visit and revisit above phenomenon happening within self-referral domain.
15. One shall permits the transcending mind to continuously remain in prolonged sitting of trans and to glimpse and imbibe 6 streams transcendence happening within self-referral domain and each stream permitting its chase in terms of the format of Sathapatya measuring rod.
16. One's one shall be perfecting one's intelligence above this 6 stream transcendence phenomenon of a self-referral domain, one shall be processing parallel to the processing systems of self-referral domain in terms of its creative dimensional order manifesting as a hyper cube format of 4 folds manifestation layers and 6 such manifestation together manifesting the creative dimensional frame of self-referral domain.
17. Then, within each of the creative dimension, as well happening a transcendence phenomenon, and the domain starts unfolding itself as of add-infinity steps.
18. One may have a pause here and take note that creative dimension itself is of a spatial dimensional order and as such there happens to be re-manifestation for the dimensional domain within the dimensional domain of the same order.
19. One may further have a pause here and take note that the internal diagonal of hexagon intersect and construct inner hexagon constrict with the outer hexagon but only half number of diagonals of the outer hexagon passing through the centre of the hexagon.
20. One shall sit comfortably and to permit the transcending mind to comprehend and imbibe the feature and value

of reach from the outer hexagon to the inner hexagon, and that the process is to continue add-infinity.

21. One may have a pause here and take note that the phenomenon of concentric hexagons, is parallel to phenomenon of compactified origins but with the only difference that here the polygons are having format of 2-space parallel to the spatial order.
22. It would be blissful to have a chase of unfolding steps of compactified origin range and the chase of inner hexagon with concentric set ups.
23. Here in the context of pentagons, it would be blissful to take note that there also happens to be an internal pentagon for the external pentagon being concentric with each other but none of the diagonals of the outer pentagon pass through the common centre of outer and inner pentagons.
24. As such, the compactified feature of origins and of concentric outer and inner polygons run parallel to each other with the only difference that in case of pentagon of all number of sides are not permitting diagonals to pass through the centre but in case of polygons of even numbers of sides 6 onwards permit only half number of diagonal to pass through the centre.
25. One shall visit and revisit above set ups and to fully comprehend the features and values of above set ups and happening.



LESSON-51

TRANSCENDENCE WITHIN SELF-REFERRAL DOMAIN

1. Self-referral domain is of a creative dimensional order and spatial order of its dimension of dimension.
2. Creator order itself sequentially takes to spatial order as its dimension and zero order as its dimension of dimension.
3. Further, zero order takes to negative spatial order as its dimension and negative creative order as its dimension of dimension.
4. These transcendence features from domain to dimension, and a head from dimension to dimension of dimension are as per the values of domain split spectrum of sequential steps.
5. Within, self-referral domain (6-space domain), split spectrum range of 6-steps sequentially takes us to split entities of the spectrum at each step as (1, 2, 5, 12, 30, 70, 169)
6. To begin with domain (N) is a single entity making it a single entity spectrum prior to the split stage.
7. At first split, N domain splits into a pair of entities of (N-2) domains, as a reach from domain (N) to dimension (N-2).
8. With it, at first split stage there happens to be a spectrum of 2 entities (N-2) domain.
9. It would further be relevant to take note that during split of N domain as a pair of (N-2) domain, here would also a release of (N-4) domain being dimension of dimension.
10. There for at the second split pair of (N-2) domains shall be splitting into quadruple (N-4) domains, which together with the earlier available (N-4) domain will make the spectrum of 5 entities of (N-4) domains.

11. However, at the stage there also would be a release of a pair of (N-6) entities as dimension of dimensions.
12. Accordingly at the third split there would be a spectrum of $(2 \times 5 + 2) = 12$ (N-6) domain spectrums.
13. And in addition there would be a release of 5 dimensions of dimensions of order (N-8) domains.
14. Accordingly at the fourth split there would be a spectrum of $(2 \times 12 + 5) = 29$ entities of (N-8) domains.
15. A step head at fifth split there would be a spectrum of $(2 \times 29 + 12) = 70$ entities of (N-10) domains.
16. And at the 6th split there would be a spectrum of $(2 \times 70 + 29) = 169$ entities of (N- 12) domain.
17. One may have a pause here and have a fresh visit to emerging spectrum entities at each sequential split of domain N as (2 entities of domain (N-2), 5 entities of domain (N-4).
18. 12 entities of domain (N-6), 29 entities of domain (N-8), 70 entities of domain (N-10), 169 entities of domain (N-12).
19. It would be blissful to take note that value 169 accepts organization as $169 = (13 \times 13)$.
20. It would be blissful to take note that number value 13 is parallel to 13 geometries range of 6-space which is further parallel to hyper cube 6 of self-referral domain.
21. One shall visit and to revisit the above entities of domain split spectrum for (1, 2, 3, 4, 5, 6 spaces domain) to have a comprehensive view of the phenomenon happening within self-referral domain permitting chase in terms of a Sathapatya measuring rod synthesized by hyper cubes 1 to 6.
22. 1-space domain split spectrum up-till 6th split shall be leading to spectrum entities (2 of (-1) domain, 5 of (-3)

- domain, 12 of (-5) domain, 29 of (-7) domain, 70 of (-9) domain and 169 of (-11) domain).
23. 2-space domain split spectrum up-till 6th split shall be leading to spectrum entities (2 of (0) domain, 5 of (-2) domain, 12 of (-4) domain, 29 of (-6) domain, 70 of (-8) domain and 169 of (-10) domain).
 24. 3-space domain split spectrum up-till 6th split shall be leading to spectrum entities (2 of (1) domain, 5 of (-1) domain, 12 of (-3) domain, 29 of (-5) domain, 70 of (-7) domain and 169 of (-9) domain).
 25. 4-space domain split spectrum up-till 6th split shall be leading to spectrum entities (2 of (2) domain, 5 of (0) domain, 12 of (-2) domain, 29 of (-4) domain, 70 of (-6) domain and 169 of (-8) domain).
 26. 5-space domain split spectrum up-till 6th split shall be leading to spectrum entities (2 of (3) domain, 5 of (1) domain, 12 of (-1) domain, 29 of (-3) domain, 70 of (-5) domain and 169 of (-7) domain).
 27. 6-space domain split spectrum up-till 6th split shall be leading to spectrum entities (2 of (4) domain, 5 of (2) domain, 12 of (0) domain, 29 of (-2) domain, 70 of (-4) domain and 169 of (-6) domain).
 28. One may have a pause here and permit the transcending to have comprehensive view of above split spectrum within self-referral domain.
 29. It would be blissful to take note that in 6 split steps, self-referral domain is leading to entities of (4, 2, 0, -2, -4, -6) domain entities.
 30. Let us pause to ourselves as to which domain is having its split entities as of 6-space domain.
 31. The answer is that $N = 18$ shall be sequentially leading to us:

- i. 2 entities of domain 16
 - ii. 5 entities of domain 14
 - iii. 12 entities of domain 12
 - iv. 29 entities of domain 10
 - v. 70 entities of domain 8
 - vi. 169 entities of domain 6.
32. It would be blissful to extent above split for six further steps and have a reach at 7th to 12th stages of split which shall be yielding further sequential split entities as under:
- vii. 408 entities of domain 4
 - viii. 985 entities of domain 2
 - ix. $(2 \times 985 + 408) = 2378$ entities of domain 0
 - x. $(2 \times 2378 + 985) = 5741$ entities of domain (-2).
 - xi. $(2 \times 5741 + 2378) = 13860$ entities of domain (-4).
 - xii. $(2 \times 13860 + 5741) = 33461$ entities of domain (-6).
33. A step head at the phase and stage of 13 split, spectrum would be of $(2 \times 33461 + 13860) = 80782$ entities of domain (-8).
34. One may have a pause here and take note that the split stages from 6th splits to 13th split lead us to spectrum entities of (6, 4, 2, 0, -2, -4, -6, -8).
35. It would be blissful to take note that these 8 steps long range of above split domains (6, 4, 2, 0, -2, -4, -6, -8) is the format of organization of formulation 'Ek Adhikana' of Ganita Sutra 1 for its first eight letters is parallel to their transcendental code values.



LESSON-52

FORMULATION 'EKA-ADHIKENA'

1. EKA ADHIKENA and PURVENA' text avails 16 letters in all.
2. First formulation 'EKA ADHIKENA' is a composition of 9 letters.
3. This 9 letters composition is of the transcendental code values range (6, 4, 2, 7, 2, 4, 6, 8, 1).
4. This transcendental code values range of formulation '**EKA ADHIKENA**' is of the format feature and values of domain split spectrum of domain (18) from its split phase and stage of 6th to 13th split format value (6, 4, 2, 0, -2, -4, -6, -8), (-10).
5. The second formulation '**PURVENA**' accepts transcendental code values range (5, 3+3, (2), 7, 6, (2), 7, 1) parallel to which is the format of transcendental domain organization.
6. Hyper cube 5 is the representative regular body of 5-space and it is of four folds (3, 4, 5, 6) of summation value $(3+4+5+6) = 18$.
7. Orientation wise the transcendence is to be from transcendental domain (5-space) through self-referral origin (6-space), and also in reverse orientation is to be from self-referral domain to transcendental domain.
8. As such, it would be a blissful exercise to chase 16 letters text from its first letter to the last, 16th letters. Also there can be a chase from 16th letter for its chase up-till first letter.
9. Further the chase, in both orientations can be from first formulation text of 9 letters to second formulation text of 7 letters. And other way round, the chase can be in reverse orientation beginning with second formulation

and the same in continuity to be carried from the last letter of first formulation to its first letter.

10. Here the above tabulation of transcendental code values of first formulation as (6, 4, 2, 7, 2, 4, 6, 8 1) is of the orientation of first letter to the last letter of the first formulation.
11. Likewise the tabulation of split spectrum of domain (18) from its 6th split phase and stage to its 13th phase and stage, and a step head up till its 14th phase and stage is in that sequence being of the values of the domain entities of respective split phases and stages is (6, 4, 2, 0, -2, -4, -6, -8, -10).
12. It is because of spatial order and the sequence equation $y = x^2$ of parabolic format, there happens to be a reversal of orientation at zero space domain reach that it is with proper appreciation of this feature in mind the comparison of the format of transcendental code value and domain split spectrum values range is to be reached at.
13. For facility of one's evaluation one's comprehension of above format features, sequential chase of transcendental code value reach for the nine letters text of formulation 'EKA ADHIKENA' is being chased here under:
14. Formulation 'EKA-ADHIKENA' is the first word formulation of the text of Ganita sutras 1.
15. First letter of this formulation is sixth vowel.
16. It accepts TCV value '6'.
17. Second letter of the formulation is the first Vargas consonant 'KA'.
18. It accepts transcendental code value TCV value '4'.
19. Third letter of formulation is elongated first vowel.
20. It accepts transcendental code value TCV value '2'.

21. The elongated first vowel together with the forth letter of the formulation take us to the formulation of Aath and Adh which means half of half, and
22. It takes us to the sequential exhaustion for the value of '7' of fourth letter of the formulation.
23. As such it is the face and staged of reach at value '0'.
24. The fifth letter of formulation is the second vowel.
25. The second vowel accepts TCV values '2'.
26. Sixth letter of formulation is the first Vargas consonant.
27. It accepts TCV value '4'.
28. Seventh letter of the formulation is the sixth vowel.
29. It accepts TCV values '6'.
30. One may have a pause here and take note that these seven letters of the formulation give rise to the range of value (6, 4, 2, 0, 2, 4, 6).
31. It would be blissful to chase this organization. It brings us face to face with parabolic format.
32. This parabolic format is parallel to transcendence format for self-referral domain '6-space domain' within creative dimensional frame (4-space as dimension) which results into reversal of orientation with reach at 0 value face and stage.
33. It would further be blissful to take note that the eight letter of the formulation 'fifth letter of the fourth of the Vargas consonant) accepts TCV values '8'.
34. One may have a pause here and take note that this is a sequential progression for (0, 2, 4, 6) into (2, 4, 6, 8).
35. One may further have a pause here and take note that the values range (0, 2, 4, 6, 8) is parallel to dimensional synthesis values range of (0, 1, 2, 3, 4) number of spatial dimensions.

36. This as such is the reach is the complete reach for quadruple spatial dimension synthesis reach.
37. This as such is the reach for the 6-space domain, which as dimension create 8-space domain. The last, ninth letter of the formulation is the first vowel accept TCV values '1' which means a fresh start of chase of 6-space (measuring rod).
38. It would be blissful to take note that the enlightenment of Shri Mad Bagwad Geeta is that: 'Amongst syllables, I am Akara, the first syllable': Lord Krishna, in coronation of Lord Vishnu, the over Lord of real 6-space.
39. Sadhakas fulfilled with intensity of urge to know and to explore further shall, in continuity chase further the transcendental code values range of the second word formulation 'PURVENA'.
40. Formulation 'PURVENA' avails 7 letters.
41. The third letter also finds its placement as the fifth letter.
42. As such, the transcendental code values (2) is being marked for its presence at both places within a bracket that this value is to be considered for only one place but at either of them.
43. The transcendental code value range for the second formulation comes to be as [5, (3+3), (2), 7, 6, (2), 7, 1].
44. One may have a pause here and take note that value (2) is of third placement while chase is in its either orientations.
45. Otherwise, in a given orientations it is of a double choice placement, at 3rd and 5th places, which in reversal become the 5th and 3rd placement.
46. This aspect and another connected aspect of organization of Ganita Sutra as of self-referral domain

and making it a mathematics of 6-space would be taken up for its details, at subsequent steps.

