

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

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REAL 4-SPACE

This day the course focus is upon 'Real 4-space'. It four folds aspects being taken up are as follows:

1. Real 4-space
2. 4-space body
3. Idol of Brahma
4. Hyper cube 4 format

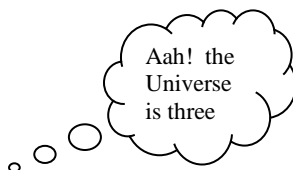
The values being covered are to be taught as lessons numbers 1 to 4 to the students of 4-space Vedic Mathematics, Science & Technology.

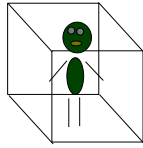
LESSON-1

Real 4-space

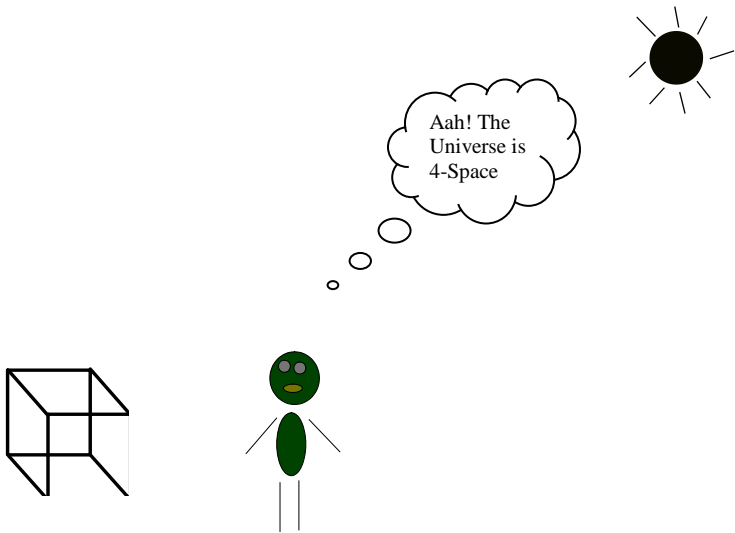
1. 4-space, with availability 4 dimensions, provides a freedom of motion for 3-space bodies under constrains of their 3 dimensional frames.
2. To come out of the mental state of a 3 dimensional frame, one shall come out of a 'room', and to glimpse the space outside the set up of the cube.

3. The outside space is not restricted up till the set up of the cube.
4. Line (1-space body) provides a degree of freedom of motion for a point (0 space body). Plane (2-space body) provides a degree of freedom of motion for a line (1-space body). Cube (3-space body) provides a degree of freedom of motion for a plane (2 space body). A step head, 4 –space body (hyper cube 4) provides a degree of freedom of motion for a cube (hyper cube 3/ 3-space body).
5. We can view this feature also as that, a point (0 space body) moves availing a line format (1-space format). Likewise line (1-space bodies moves availing plane format (2-space format) and, plane (2-space body) moves availing cube format (3-space format). and, a step head, cube (3-space body) moves availing hyper cube format (4-space format).
6. We are living in a space which solid (3-space) bodies are moving as the space provides a format for its motion where by the space of our motion, as it is of a dimensional order higher than that of the dimensional order of 3-space.



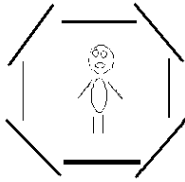
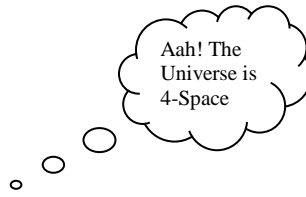


7. While sitting in a room, one gets conditioned as if the universe is just 3-Space. The movement one comes out of

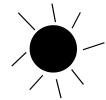


the room, the one with melting of the conditions enjoys the bliss as the universe being a 4-Space.

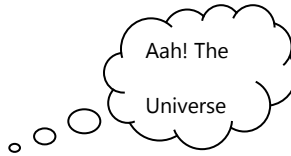
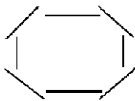
Soon this blissful state manifests as a mental block and one becomes conditioned as caged within 4-Space



With mind transcending this state and the conditioning manifestation melt, and give way to the emergence of the transcendental state, one gets fulfilled with ambrosia of bliss of the transcendental worlds (5-Space):



5-space



This, melting conditioning the universe for the individuals intellectual ranges which is to be attended to and rest is to followed of its own.



this way, it is the sequential of the mental blocks

BLISSFUL GLIMPING

EXERCISE

8. One shall sit comfortably and permit the transcending mind to continuously remain in prolonged sitting of trans and to glimpse and imbibe the above format feature and values.
9. One shall start with a **point** (0 space body) and create 1-space format.
10. One shall start with a **line** (1-space body) and create 2-space format.
11. One shall start with a **plane** (2-space body) and create 3-space format.
12. One shall start with a **solid** (3-space body) and create 4-space format.
13. One shall glimpse further and chase 4-space body in its dynamic state creating 5-space body.
14. A step head, one shall further glimpse 5-space body creating 6-space format.

CONCEPTUAL TERMS

1. **Interval** is 1-space body.
2. **Square** is a 2-space body.
3. **Cube** is a 3-space body.

4. **Interval** is hyper cube 1.
5. **Square** is hyper cube 2.
6. **Cube** is hyper cube 3.
7. **Hyper cube 4** is a 4-space body.
8. **1-space** as dimensional frame of one dimension.
9. **2-space** as a dimensional frame of two dimensions.
10. **3-space** as a dimensional frame of three dimensions.
11. **4-space** as a dimensional frame of four dimensions.
12. **1-space content** manifests as length part (domain) of hyper cube 1.
13. **2-space content** manifests as area part (domain) of hyper cube 2.
14. **3-space content** manifests as volume part (domain) of hyper cube 3.
15. **4-space content** manifests as domain fold of hyper cube 4.



LESSON-2

4-SPACE BODY

1. **Interval**, as 1-space body, accepts domain boundary ratio formulation $\mathbf{a^1:2b^0}$, as its end points constitutes a boundary of a pair of components of 0space bodies.
2. **Square**, as 2-space body, accepts domain boundary ration formulation $\mathbf{a^2:4b^1}$, as its boundary lines are four in number and these together as quadruple 1-space bodies constitute boundary fold.
3. **Cube**, as 3-space body, accepts domain boundary formulation $\mathbf{a^3:6b^2}$, as six surface plates envelop volume (domain) of the cube and constitute its boundary fold.
4. One may have a pause here and have a simultaneous visit to domain- boundary formulations of interval, square and cube (hyper cubes 1, 2 and 3) and same shall be bringing us face to face with a single formulation : $\mathbf{a^n:2nb^{n-1}}$, $N = 1, 2, 3$ for their individual formulation. Taking hyper cube 4 as the fourth member of the sequence of hyper cubes (representative regular bodies of (1, 2, 3, 4 ... spaces), the same for $N = 4$ shall be leading us to domain-boundary formulation for hyper cube 4 as $\mathbf{a^4:8b^3}$.
5. One may further have a pause here and to re-visit the set ups of boundaries of hyper cubes (1, 2, and 3) and it would be coming to pointed focus as that two (0 space) bodies constitutes boundary of hyper cube 1 (interval), four (1-space) bodies constitutes boundary of hyper cube 2 (square), and six (2-space) bodies constitutes boundaries of hyper cube 3 (cube/3-space bodies)

6. This, in this sequential order, settles boundary of hyper cube 4 (4-space) body, as a set up of eight (3-space) bodies.
7. With this settlement of the boundary (fold) of (4-space) body, one basic feature of (4-space) body stands settled for us.
8. As for as the domain fold enveloped within solid boundary of eight components is concerned the same is the expression of 4-space content as it manifests being enveloped within a solid boundary.
9. With it, 4-space content manifesting an expressing as domain fold and 3-space content, manifesting as a expressing as boundary fold emerge as the pair of basic feature of 4-space body.
10. One may have a pause here and take note that domain fold and boundary fold of 1-space body are the manifested expression of 1-space content and zero space content respectively.
11. Likewise, domain fold and boundary fold of 2-space body are the manifested expression of 2-space content and 1-space content respectively.
12. Further as that, domain fold and boundary fold of 3-space body are the manifested expression of 3-space content and 2-space content respectively.
13. One shall sit comfortably and permit the transcending mind to continuously remain in prolonged sitting of trans and to glimpse and imbibe the above format feature and values.

BLISSFUL GLIMPSIING EXERCISE

1. One shall distinctively glimpsed the distinguishing feature of dimensional space being their because of their space contents being of distinguish values and features.
2. One shall glimpse and imbibe the value of space content being of the feature that it manifests domain fold of its body.
3. One shall glimpse and express oneself about one's comprehension of the feature of 1-space content manifesting as domain fold of hyper cube 1(interval), of 2-space content, manifesting as domain fold of hyper cube 2 (square), of 3 space content, manifesting as domain fold of hyper cube 3 (cube), and of 4-space content, manifesting as domain fold of hyper cube 4 (representative regular body of 4-space).
4. It would be a blissful exercise to distinctively glimpsed pair of features of a space contents, manifesting as domain fold, and manifesting as boundary fold.
5. It would be very blissful exercise to chase feature of 1-space content manifesting as domain fold of hyper cube 1, and also manifesting as boundary fold of hyper cube 2.
6. Further, it would also be a blissful exercise to chase a pair of feature of 2-space content manifesting as domain fold of hyper cube 2, and manifesting as boundary fold of hyper cube 3.
7. Still further, it would also be blissful exercise to chase a pair of feature of 3-space content manifesting as domain fold of hyper cube 3, and manifesting as boundary fold of hyper cube 3.
8. Still further, it would be a blissful exercise to chase pair of features of 4-space content manifesting as domain

fold of hyper cube 4 and manifesting as boundary fold of hyper cube 5.

9. This glimpsing chase at a step head shall be bringing us face to face with a pair of feature of 5-space content firstly as it manifests as domain fold of hyper cube 5 and secondly as it manifests as boundary fold of hyper cube 6.

CONCEPTUAL TERM

1. **4-space content.**

Scripture approach 4-space as creator's space.

2. **Creative domain.**

Four space domain is designated as creative domain.

3. **Creative boundary.**

Four space as boundary of 5-space is designated as creative boundary, while 5-space domain itself is designated as transcendental domain.

4. **Creative origin.**

Four space as origin of three space is designated as creative origin.

5. **Centre of cube as seat of four space.**

One shall recapitulate from the learning reach of previous year reach at the centre of the cube as a seat of four space.

One shall glimpse and imbibe the feature of the set up of the cube accepting split into eight sub cubes with their

inner most corner points having common placement at centre of the cube itself.

This, that way bring to focus the distinguishing feature of the centre of the cube form all other points of the cube.

6. Center of the cube is of a dual status, firstly being a point of the cube itself, and secondly as the seat of placement of innermost corner points of all the eight sub cubes making it a set up of enveloping for the space at the centre of the cube by a solid boundary of eight components.
7. With it, the space at center of the cube becomes of a manifested state of 4-space content enveloped within a solid boundary of eight components. These value make centre of cube a seat of 4-space. ■

LESSON-3

IDOL OF LORD BRAHAMA

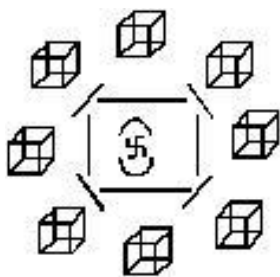
1. Scripture values and Brahma.
2. Lord head lord.



well preserves
feature of Lord

Brahma is four

3. Each head of lord Braham is equipped with a pair of eyes.
4. Lord Braham sits gracefully on the lotus seat of eight petals.
5. Within cavity of heart of lord Braham is the seat of transcendental lord Shiv.
6. Lord Braham meditates upon transcendental lord within cavity of his own heart.
7. With grace lord Shiv, multiplies of transcendental lord Braham as ten Brahmas.
8. These features values and bring us parallel to features of format of hyper cube 5, the representative regular body of four space.



9. 4 dimensions of hyper cube 4 are parallel to four heads of lord Braham.
10. The spatial dimensional order of hyper cube 4 is parallel to pair of eyes equipped in each head of lord Brahama.
11. The solid boundary of eight components of hyper cube 4 is parallel to lotus seat of eight petals.
12. Transcendental origin (5-space as origin fold) of hyper cube 4 is parallel to seat of transcendental lord Shiv, the over lord of 5-space, within cavity of heart of lord Braham.
13. 4-space permit transcendence at the transcendental origin and manifests as creative boundary of ten components of transcendental domain (5-space) which is parallel to the virtue of lord Braham multiplying as ten Brahamas with the grace of transcendental lord Shiv.
14. Lord Braham is creator's supreme and this bring us face to face with the hyper cube 4 as the creation format.
15. One shall sit comfortably and permit the transcending mind to continuously remain in prolonged sitting of trans and to glimpse and imbibe the above format feature and values.
16. It would be blissful to glimpse and to chase hyper cube 4 as a four folds manifestation layer of value and features: (2-space content manifesting as dimension fold, 3-space contents manifesting as boundary fold, 4-space manifesting as domain fold, 5-space content manifesting as origin fold.

17. Parallel to these four folds format is the format of quadruple numbers values (2, 3, 4, 5) of summation value 14. This is a particular case of value $N = 4$ for the quadruple numbers values ($N-2$, $N-1$, N , $N+1$) of summation value $4N-2$.
18. Parallel to quadruples values ($N-2$, $N-1$, N , $N+1$) is the four folds manifestation layer of hyper cube N of values and features: ($N-2$) space content as dimension fold, ($N-1$) space content as boundary fold, N space content as domain fold, ($N+1$) space content as origin fold.
19. This leads us to a sequence of hyper cubes N , $N = (1, 2, 3, 4, 5 \dots)$.
20. This sequence permits extension with inclusion of hyper cube 0.
21. It further permits extension with inclusion of hyper cubes ($-N$ for all value of N).

BLISSFUL GLIMPSING EXERCISE

1. One shall sit comfortably and permit the transcending mind to continuously remain in prolonged sitting of trans and to glimpse and imbibe the above format feature and values.
2. One shall glimpse values and feature of hyper cube 4 along the format of idol of Braham.

3. One shall further glimpse values and features of hyper cube 5 as a four folds manifestation layer (3, 4, 5, 6).
4. Further, one shall glimpse values and features of hyper cube 6 as four folds manifestation layers (4, 5, 6, 7).
5. It would be a very blissful exercise to glimpse the set up of interval as hyper cube 1 of four folds (-1, 0, 1, 2).
6. Still further, it would also be a blissful exercise to glimpse and imbibe the values and features of square as hyper cube 2 of four folds (0, 1, 2, 3).
7. Still further, it would be a very blissful exercise to glimpse and imbibe the values and features of cube as hyper cube 3 of four folds (1,2,3,4).
8. It would further be a very blissful exercise to glimpse and imbibe four folds values and features of space content specifically and distinctively as manifesting, firstly as dimension fold, secondly as boundary fold, thirdly as domain fold and fourthly as origin fold.
9. One shall chase quadruple values and feature of (1-space) content as dimension fold of hyper cube 3, boundary fold of hyper cube 2, domain fold of hyper cube 1 and origin fold of hyper cube 0.
10. Still further, one shall chase quadruple values and features of (2-space) content as dimension fold of hyper cube 4, boundary fold of hyper cube 3, domain fold of hyper cube 2 and origin fold of hyper cube 1.

11. Still further, one shall chase quadruple values and features of (3-space) content as dimension fold of hyper cube 5, boundary fold of hyper cube 4, domain fold of hyper cube 3 and origin fold of hyper cube 2.
12. Still further, one shall chase quadruple values and features of (4-space) content as dimension fold of hyper cube 6, boundary fold of hyper cube 5, domain fold of hyper cube 4 and origin fold of hyper cube 3.
13. Still further, one shall chase quadruple values and features of 5-space content as dimension fold of hyper cube 7, boundary fold of hyper cube 6, domain fold of hyper cube 5 and origin fold of hyper cube 4.
14. Still further, one shall chase quadruple values and features of 6-space content as dimension fold of hyper cube 8, boundary fold of hyper cube 7, domain fold of hyper cube 6 and origin fold of hyper cube 5.

CONCEPTUAL TERMS

1. Space content playing the role as a dimension fold.
2. Space content playing the role as a boundary fold.
3. Space content playing the role as a domain fold.
4. Space content playing the role as an origin fold.
5. Four consecutive dimensions space content manifesting as a manifestation layer.

6. Dimensional frame of hyper cube n is a set up of N dimension of $(N-2)$ order as $(N-2)$ space content plays the role of dimension of n space,
7. Enveloping boundary of hyper cube N is a set up of $2N$ bodies of $(N-1)$ space.
8. Domain fold is enveloped with in boundary fold.
9. Domain fold remains integrated in terms of its dimensional frames.
10. Origin of dimension frame and the origin fold gets superimposed upon each other and with it domain fold gets sealed.
11. A sealed and framed domain fold is enveloped by boundary and remains integrated by its dimensional frame with origin of dimensional frame getting superimposed upon the origin fold.
12. Origin fold accepts a base fold for its sustain-ness and base fold becomes the fifth fold of the four fold manifestation layer but same remains in un-manifest form during origin fold itself remaining sealed with superimposition of the origin of the dimensional frame.
13. Domain fold marks its presence in manifested form while origin fold along with base fold marks its presence in its un-manifest form.



LESSON-4

HYPER CUBE FORMAT

1. To appreciate the structural reach-ness of format of 'hyper cube', first of all one shall glimpse and imbibe the values and features of 'dimension fold, boundary fold, domain fold and origin fold'.
2. Then, as a second step, one shall comprehend the virtues of the 'base fold, format fold and unity state' of the set up of sustain-ness of 'hyper cube' itself.
3. This, this way makes it a chase range of 7 steps namely:
 - (i) Dimension (ii) Boundary (iii) Domain (iv) Origin (v) Base (vi) Format and (vii) Unity state.
4. Of these, the first four steps namely dimension, boundary, domain and origin, as well get distinctively grouped as dimension, boundary and domain, as a distinct group and origin in itself also be a distinct group.
5. Origin marks its presence in the set up of the domain in its un-manifests form, as well as in a manifest form.
6. Origin, while in un-manifest form, makes domain in a sealed state.
7. During this sealed state, domain becomes a reservoir of 'push-pull' values balancing themselves and making domain being in an integrated state because of the dimensional frame with its origin superimposed upon origin of the domain, otherwise being enveloped within its boundary fold.

8. With origin fold, in its manifest state, permits transcendence through it for reach at the base of the origin.
9. Hyper cube format being of values and features of idol of Lord Brahama, as such it makes spatial order 4-space as the source domain of values and features of hyper cube 4 format.
10. With it, the Sadhakas fulfilled with intensity of urge to fully glimpsed and to completely imbibe the values and features of hyper cube 4 format, they shall initiate themselves for this chase along the format of hyper cube 4, as a four folds manifestation layer (2, 3, 4, 5) accepting extension as (2, 3, 4, 5; 6, 7, 8).
11. One may have a pause here and take note that this bring us face to face with 7 steps long range of roles for 2 –space to 8-space contents, as:
 - i. 2-space content manifesting and playing the role of dimension fold
 - ii. 3-space content manifesting and playing the role of boundary fold
 - iii. 4-space content manifesting and playing the role of domain fold
 - iv. 5-space content manifesting and playing the role of origin fold.
 - v. 6-space content manifesting and playing the role of base fold.
 - vi. 7-space content manifesting and playing the role of format of base fold.

vii. 8-space content manifesting and playing the role of unity state of format of base fold.

12. Essentially, it is because of the spatial order (2-space) in the role of dimension, and the dimensional frame being a set up of four spatial dimensions, that the 'hyper cube 4 format' covering whole range of hyper cubes, of lower dimensional order or higher dimensional order than that of spatial order, acquire their values and features.

13. The spatial order, with it pair of dimensions makes either of its dimension being the first and other as the second (dimension).

14. It is this feature that either of the pair of dimensions accepts its role as first of the second dimension which makes its values being of a pair of opposite orientation getting superimposed and making it an integrated whole of a pair of halves because of which becomes the availability of a pair of unit namely '2 as 1 and 1 as 2', together making it '1/2' as the working unit of 4-space.

15. One may have a pause here and take note that it is this feature which is the basis base for split of a dimension into a pair of half dimensions and further a split of a dimensional frame into a pair of dimensional frames of half dimensions.

16. One may further have a pause here and take note that it is this value and feature of a spatial order, which is at the basis base of 3 dimensional frames of

half dimensions being embedded in the corners point of the cube (hyper cube 3), as well as in the corner point of the square (hyper cube 2).

17. One may further have a pause here and take note that the split of dimension into a pair of half dimensions and the split of the boundary into components double in number then the number of dimensions are their because of $(1/2)$ as the working unit as resultant of a pair of units (2 as 1 and 1 as 2' supplied by the spatial order of creator's space (2-space as the dimension of 4-space).
18. One may further have a pause here and take note that number value 4 is unique as that:
 - (i) $4 = 2 + 2$.
 - (ii) $4 = 2 \times 2$.
 - (iii) $4 = (-2) \times (-2)$.
19. Here in the context, it also would be relevant to take note that:
 - (i) $0 = 0 + 0$.
 - (ii) $0 = 0 \times 0$.
 - (iii) $0 = (-0) \times (-0)$.
20. One shall sit comfortably and permit the transcending mind to continuously remain in prolonged sitting of trans and to glimpse and imbibe the above format feature and values.
21. One may further have a pause here and take note that 4-space accepts 2-space as its dimensions and a step head, 2-space accepts, zero space as its dimension.

22. As such, to glimpse the values and features of hyper cube format, one shall not remain up till the dimension fold and to transcendence up till dimension of dimension fold to imbibe the values and features and structural reach-ness of the format of 'hyper cube'.
23. One may further have a pause here and take note that this glimpsing feature of reaching, at first step, form domain to dimension, and as second step from dimension to dimension of dimension, is to be comprehended for its full appreciation as it is in term of its that we shall be having insight reach for the structural reach-ness of the domain fold itself.
24. One may further have a pause here and take note that the domain fold is the space content lump in its manifesting form as domain fold of hyper cube, being the representative regular body of the space.
25. One may further have a pause here and take note that:

‘The space content plays its different roles only as in the form of ‘manifested space content lumps being domain’.

As such, the insight reach for dimension fold, boundary fold, domain fold, origin fold and a head, in respect of base fold, format of base fold and unity state of format of base fold, as well, is to be faced only in terms of this ‘processing technique’.

It would be relevant to take note the this processing technique, at each step is accepting the reached state as of domain fold values and features and a reach from domain to dimension is a reach from domain to dimension as a domain of respective space and a step head, a reach at dimension of dimension is going to be as that a dimension of dimension itself is a domain of the respective space.

26. As origin is of a higher dimensional order than that of domain fold, as such domain fold acquires dynamic state with origin coming in its manifested form of higher dimension order. This brings in transcendence phenomenon for the domain fold through origin fold for its reach at the base fold, and also because of the spatial order availability, the transcendence in reverse order as well may happen as a reach back from base fold through origin fold to the domain fold which will reach up till the boundary fold.
27. One shall sit comfortably and permit the transcending mind to continuously remain in prolonged sitting of trans and to glimpse and imbibe the above format feature and values.
28. These values and features of format of hyper cube, successfully mathematize chase along artifices of numbers for 'pair of opposite orientation, split and synthesis of dimensional frames, split and synthesis of domains, to fold transcendence, static and

dynamic states, curvatures, powers, roots, range of sequential gaps, grids, cells, push-pull reservoir, transformation of reservoirs as a single integrated whole of pair of half domain zones reservoirs of self sustaining format, swapping of space in terms of paired pair of hyper spheres, chase of transcendental carriers through rays of the sun and unified discipline of existence phenomenon of our solar universe and parallel formatting for the existence within human frame and existence within our solar universe. ■