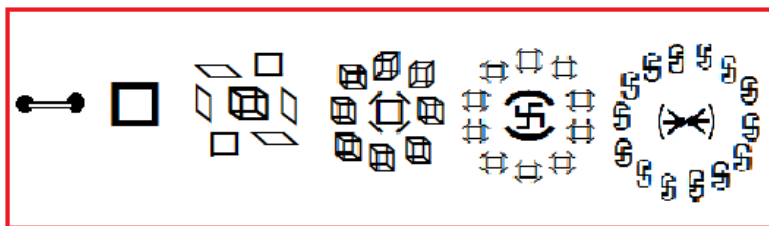


VEDIC MATHEMATICS

&

MODERN MATHEMATICS

SATHAPATYA MEASURING ROD



(HYPER CUBES 1 TO 6)

Sixth Week : Day 6

Algebraic equation

1. First of all let us have a fresh look at the symbol (=).
2. It is the symbol of equality.
3. This symbol avails a pair of parallel lines of equal length.
4. This symbol, as such preserves many features, say of equality
5. Equation avails the format of equality.
6. Equation has pair of sides of values, and both being value wise equal.
7. Algebra covers the Mathematics of the format of equality.
8. Essentially the values of numbers are the basic tools for equalizing different values
9. The arithmetic operation accepted by numbers systems are availed to re-organize the values of different sides of the equation.
10. Therefore arithmetic's may be taken as the base Discipline for the Discipline of algebra.
11. It is, the other way round as well that the Discipline of algebra brings us face to face with the format and features of operations accepted by the number systems.
12. Though initially it would be advisable to take up arithmetic and algebra as a distinct Discipline and in the sequence which will brings arithmetic at first step but at advance stage both these Disciplines deserve to be approached simultaneously.
13. The equations have the flexibility to handle one or more variables at a time.
14. It is this variability of algebra which shall be making itself at the dominant positions.
15. It is not only the number of variables but also the powers of the variables which make algebra to be structurally rich
16. It is this structural richness of algebra which makes it important and valuable
17. The powers of variables that way bring into more than one values for the variable.

18. Illustratively $(1^2 = 1 = (-1)^2$, that way leads to 1 and (-1) both as square roots of same value
19. Solutions of first, second, third and fourth degree equations, sequentially brings us face to face with additional features of variables
20. From fifth degree equation onwards, a new caluse of values for the variables step in
21. All these features deserve to be exposed at school level Mathematics.
22. Beejganitam (algebra) by Sh. Bhaskracharya brings us face to face with the Discipline of algebra of Bhaskracharya time.
23. Leelawati by Sh. Bhaskracharya and Beejganitam (algebra) by Sh. Bhaskracharya are two such text book which were holding the ground in India prior to the present day school Mathematics has taken the place of main stream school Mathematics.
24. Therefore the values of arithmetic of Leelawati and algebra of Beejganitam deserve to be visited again to appreciate the need for augmentation of school Mathematics.
25. It may be surprise for me that Narad Puran is one such puran which deals with the Mathematics in great detail, the Mathematics values preserved in Narad Puran deserve to be comprehended well for their appreciation and imbibing .
26. Ganita Sutras further deepens our insight about the Mathematics at its first principles.
27. About quadratic, cubic and higher polynomial equations, chapters 10, 11 and 12 of Book Crowning Gem by Kenneth Williams may provide us an insight about the reach of Ganita

Sutras. Algebra is the bridge between Arithmetic and Geometry.

Dr. S. K. Kapoor, *Ved Ratan* ■