



## SYLLABUS FOR ROOTS 2023

### SYLLABUS FOR CUBE ROOTS (GRADE 5 & 6)

The students will be tested on

- Numerical ability
- Addition, subtraction, multiplication, division, fractions, decimals
- Divisibility tests, primes and composites, factors and multiples
- LCM and HCF, change of bases from base 10 to some other base and vice versa
- Integers, Basic geometry of circles, rectangles, squares, triangles, properties of angles of a triangle, quadrilateral and polygons
- Alphas, division algorithms
- Elementary Counting Problems
- Logical Puzzles

### SYLLABUS FOR SQUARE ROOTS (GRADE 7 & 8)

- Primes and Composites
- Number of divisors of a number, LCM, GCD and their properties
- Rational numbers and their properties, Time and distance
- Ratio and Proportion, Integers, Basic algebra, laws of exponents
- Algebraic identities, expanding and factoring algebraic expressions, Modulo Arithmetic, Basic counting problems
- Special quadrilaterals such as rectangle, square, parallelogram, rhombus, trapezium
- Simple properties of triangles such as isosceles and right triangles, Locus problems
- Circumcentre, incentre, orthocentre and centroid and their properties, arcs and subtended angles and mensuration.

Knowledge Partner:



Aryabhata Institute of  
Mathematical Sciences

Outreach Partners:



Scholastic Test of Excellence in Mathematical Sciences



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