

INTERNATIONAL COMPETENCE AND APTITUDE TESTING SERVICES (ICATS)

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# **ICATS - MATHS CONTEST**

## **COURSE OUTLINE**

## Level 1 & 2:

Pre Number concepts – Tall, short big and small, Numbers - Odd and Even Numbers, Arithmetic Operation with 1 digit and 2 digit number-Addition and subtraction, Money - Addition and subtraction of money, Time, Clock, Shapes – Naming & Recognition of shapes, Fractions – Half, Quarter

### Level 3 & 4:

Numbers- Place Value, Arithmetic operations -Addition, Subtraction, Multiplication, Division, Money - Four Arithmetic operations, Fractions - Addition and subtraction with same denominator, Decimals - Addition and subtraction of decimals, Perimeter and Area of square and Rectangle, Angles- Types of angles

#### Level 5 & 6:

Arithmetic Operations, Factors & Multiples, Fractions-Multiplication & Division by whole number, Decimals- Multiplication & Division, Rounding Numbers, Percentages- Expression Fractions as Percentages and percentages as fractions, Algebra, Volume – Volume of cube and cuboid.

#### Level 7 & 8:

Rational Numbers, Data Handling- Mean, Median, Mode, Ratios & Percentages, Square and square roots, Algebraic expressions, Exponents and powers, Area- polygon, Parallelogram, Proportion- Direct and inverse

#### Level 9 & 10:

Real Numbers, Polynomials, Linear Equations, Quadratic Equations, Matrices Lines and angles Surface area and volume– Cube, Cuboid and Sphere, Trigonometric Ratios, Grouped Data-Mean, Median Mode, Exponential and Logarithm Function.

#### Level 11 & 12:

Rational Expressions and Rational Functions, Statistics and probability, Matrices and Determinants, Mathematical Reasoning, Sequences and series, Differential Calculus, Integral Calculus, Mathematical Applications for Business and consumers.