

# MATHS SYLLABUS

## Class – 7

### 7<sup>th</sup> Class Maths Syllabus – An Overview

Mathematics is a subject that needs to be practised extensively in order to get the best results. The preparation for students aiming for higher studies in Mathematics starts from a very young age. In addition, CBSE Class 7 Mathematics is considered an important step for all students studying in schools affiliated with CBSE. The CBSE Class 7 Mathematics Syllabus has been designed in a way that it can provide students with much-needed insights into Mathematics and its different applications. There may be much more difficulty in the Syllabus of CBSE Class 7 Math as compared to the preceding Class.

### Chapter – 1 ( Integers )

Introduction, Recall, Properties of addition and subtraction of integers, multiplication of integers, properties of multiplication of integers, division of integers, properties of division of integers.

- 1.1) Division of Integers.
- 1.2) Multiplication of Integers.
- 1.3) Properties of Addition and Subtraction of Integers.
- 1.4) Properties of Multiplication of Integers.

### Chapter – 2 (Fractions and Decimals )

- Revision of fractions, Proper fractions and Improper fractions, addition and subtraction of fractions.
- Multiplication of fractions.
- Division of fractions
  - Multiplication of Decimal numbers
  - Division of decimal numbers

## **Chapter – 3 (Data Handling )**

- Collecting data
- Organization of data
- Representative values, mean, mode, median
- Use of bar graphs with a different purpose, chance and probability.

## **Chapter – 4 ( Simple Equations )**

- Generating an equation.
- Solving Simple Equations.
- From solution to Simple equation.
- Application of simple equation to practical situation.

## **Chapter – 5 ( Lines and Angles )**

Introduction, related angles, pair of lines, checking of parallel lines.

- Related angles: Complementary angles, Supplementary angles, vertically opposite angles.
  - Pairs of Angles.
  - Pairs of Lines.
  - Relation Between Angles.

## **Chapter – 6 ( The Triangle and its Properties )**

Angle sum property (with notions of proof & verification through paper folding, proofs using property of parallel lines, difference between proof and verification.)

- Exterior angle property

- Sum of two sides of a triangle is greater than its third side.
- Lengths of the Sides of a Triangle.
- Medians and Altitudes of Triangles.
- Properties of a Triangle.
- Pythagoras Theorem (Verification only).

## Chapter – 7 ( Comparing Quantities )

- 1.1) Application of Percentage.
- 1.2) Equivalent Ratios and Comparison.
- 1.3) Introduction to Percentage.
- 1.4) Profit and Loss Percent
- 1.5) Simple Interest

## Chapter - 8 ( Power and Exponents )

Exponents only natural numbers.

- Laws of exponents (through observing patterns to arrive at generalisation.)

(i)  $a^m \cdot a^n = a^{m+n}$

(ii)  $(a^m)^n = a^{mn}$

(iii)  $a^m / a^n = a^{m-n}$

- Exponents and Their Uses.
- Large Numbers in Standard Form.

## Chapter – 9 ( Ratio and Proportion )

- Ratio and proportion (revision)
- Unitary method continued, consolidation, general expression.
- Percentage- an introduction.
- Understanding percentage as a fraction with denominator 100
- Converting fractions and decimals into percentage and vice-versa.
- Application to profit and loss (single transaction only)
- Application to simple interest (time period in complete years).

## Chapter – 10 ( Mensuration )

- Area of Squares and rectangles.
- Triangles as part of rectangles.
- Generalizing for other congruent parts of rectangles.
- Area of a parallelogram.
- Area of a triangle.
- Circles: circumference of a circle.
- Area of circle.
- Conversion of units, Applications.

