

Class – IX
DELETED SYLLABUS
(For the Session of 2020-21 Only)
MATHEMATICS
(THEORY)

UNIT I : NUMBER SYSTEMS

1. REAL NUMBERS

Representation of terminating / non-terminating recurring decimals, on the number line through successive magnification.

Explaining that every real number is represented by a unique point on the number line and conversely, every point on the number line represents a unique real number.

UNIT II : ALGEBRA

1. POLYNOMIALS

State and motivate the Remainder Theorem with examples. Statement and proof of the Factor Theorem.

Identities of the type

$x^3 + y^3 + z^3 - 3xyz = (x + y + z)(x^2 + y^2 + z^2 - xy - yz - zx)$ and their use in factorization of polynomials.

2. LINEAR EQUATIONS IN TWO VARIABLES

Including problems on Ratio and Proportion

UNIT IV : GEOMETRY

1. INTRODUCTION TO EUCLID'S GEOMETRY

History - Euclid and geometry in India. Euclid's method of formalizing observed phenomenon into rigorous mathematics with definitions, common/obvious notions, axioms/postulates and theorems. The five postulates of Euclid. Equivalent versions of the fifth postulate. Showing the relationship between axiom and theorem.

1. Given two distinct points, there exists one and only one line through them.
2. (Prove) two distinct lines cannot have more than one point in common.

3. TRIANGLES

1. (Prove) Two triangles are congruent if any two angles and the included side of one triangle is equal to any two angles and the included side of the other triangle (ASA Congruence).

2. (Motivate) Triangle inequalities and relation between 'angle and facing side' inequalities in triangles.

5- **AREA**

Review concept of area, recall area of a rectangle.

3. (Prove) Parallelograms on the same base and between the same parallels have the same area.
4. (Motivate) Triangles on the same base and between the same parallels are equal in area and its converse.

6- **CIRCLES**

- 1) (Motivate) There is one and only one circle passing through three given non-collinear points.
- 2) (Motivate) If a line segment joining two points subtends equal angle at two other points lying on the same side of the line containing the segment, the four points lie on a circle.

7. **CONSTRUCTIONS**

1. Construction of a triangle of given perimeter and base angles.

UNIT V : MENSURATION

1. **AREAS**

Area of a triangle using Hero's formula (without proof) and its application in finding the area of a quadrilateral.

UNIT VI : STATISTICS AND PROBABILITY

1. **STATISTICS**

Histograms (with varying base lengths), frequency polygons, Mean, median, mode of ungrouped data.