Class 9 Maths Notes — Chapter■Wise (2026)

1. Number Systems

- Types of numbers: Natural, Whole, Integers, Rational, Irrational.
- Real numbers = Rational + Irrational.
- Decimal expansion: Terminating or Non■terminating recurring $\rightarrow$ Rational; Non■terminating non■recurring $\rightarrow$ Irrational.
- Laws of exponents for real numbers.
- Representation of real numbers on the number line.

2. Polynomials

- Polynomial: Expression with variables and coefficients.
- Degree: Highest power of the variable.
- Types: Linear (1), Quadratic (2), Cubic (3).
- Zeroes of a polynomial: Value that makes it zero.
- Factorisation using identities.

3. Coordinate Geometry

- Cartesian plane formed by X■axis and Y■axis.
- Origin (0,0) is intersection point.
- Quadrants: I (+,+), II (−,+), III (−,−), IV (+,−).
- Ordered pair (x,y) represents a point.

4. Linear Equations in Two Variables

- General form: $ax + by + c = 0$.
- Solution is an ordered pair (x,y).
- Graph is a straight line.
- Linear equation has infinitely many solutions.

5. Introduction to Euclid's Geometry

- Based on definitions, axioms, and postulates.
- Axiom: Universal truth.
- Postulate: Geometric assumption.
- Foundation of modern geometry.

6. Lines and Angles

- Types: Acute, Right, Obtuse, Straight, Reflex.
- Linear pair: Sum = 180°.
- Vertically opposite angles are equal.
- Parallel lines with transversal create angle pairs.

7. Triangles

- Triangle types: Scalene, Isosceles, Equilateral.
- Angle sum of triangle = 180°.
- Congruence rules: SSS, SAS, ASA, RHS.
- Exterior angle = Sum of opposite interior angles.

8. Quadrilaterals

- Four■sided polygon.
- Angle sum = 360°.
- Parallelogram: Opposite sides parallel & equal.
- Diagonals bisect each other.

9. Circles

- Circle: Set of points equidistant from center.
- Radius, Diameter, Chord, Arc.
- Equal chords are equidistant from center.
- Angle subtended by arc at center is double at circumference.

10. Mensuration

- Area of triangle using base × height / 2.
- Heron's formula for area using sides.
- Surface areas and volumes of cube, cuboid, cylinder, cone, sphere.

11. Statistics

- Collection and organization of data.
- Frequency tables.
- Graphs: Bar graph, Histogram.
- Measures of central tendency: Mean, Median, Mode.

12. Probability

- Probability = Favorable outcomes / Total outcomes.
- Value lies between 0 and 1.

- 0 $\rightarrow$ Impossible event, 1 $\rightarrow$ Certain event.
- Based on experiments.