



- AI & Future Skills Integration

CLASS-8

Syllabus and Exam Pattern

● SECTION A: NUMBER SYSTEM & OPERATIONS (15%)

1. Rational Numbers

- Properties and operations
- Simplification and application

2. Exponents & Powers

- Laws of exponents
- Standard form (basic understanding)

◆ SECTION B: ALGEBRA (25%)

1. Algebraic Expressions & Identities

- Expansion and simplification
- Standard identities

2. Linear Equations in One Variable

- Solving equations
- Word problems

3. Introduction to Polynomials

- Basic understanding and operations
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● SECTION C: COMPARING QUANTITIES (15%)

1. Percentage

- Conversion and applications

2. Profit, Loss & Discount

- Real-life problems

3. Simple Interest

- Basic calculations and applications
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● SECTION D: GEOMETRY & MENSURATION (15%)

1. Geometry

- Understanding quadrilaterals
- Practical geometry (basic constructions)

2. Mensuration

- Perimeter and area (2D shapes)
 - Surface area and volume (basic 3D shapes)
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◆ SECTION E: DATA HANDLING & PROBABILITY (10%)

1. Data Handling

- Bar graphs, pie charts
- Interpretation and analysis

2. Probability

- Basic probability concepts
 - Simple problems
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● SECTION F: SQUARES, SQUARE ROOTS & CUBES (5%)

- Squares and square roots
 - Cubes and cube roots (basic understanding)
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SECTION G: SMART LOGIC & AI AWARENESS (10%)

(No specific study required)

1. Pattern Recognition

- Number, algebraic and visual patterns

2. Logical & Analytical Thinking

- Multi-step reasoning
- Problem-solving strategies

3. AI Thinking (Conceptual Level)

- Understanding how data is used
- Pattern-based decision making
- Real-life AI applications (education, banking, etc.)

SECTION H: ADVANCED REASONING & HOTS (5%)

- Algebra-based reasoning
- Number series (advanced)
- Coding-decoding
- Logical puzzles

Weightage Structure

Section	Area	Weightage
A	Number System & Operations	15%
B	Algebra	25%
C	Comparing Quantities	15%
D	Geometry & Mensuration	15%
E	Data Handling & Probability	10%
F	Squares & Cubes	5%
G	Smart Logic & AI Awareness	10%
H	Advanced Reasoning & HOTS	5%

Total = 100%

EXAM PATTERN

- Mode: Online / Offline (MCQ Based)
- Total Questions: 50
- Total Marks: 50
- Duration: 50 Minutes

Question Distribution:

- Core NCERT Maths: 40 Questions
 - Smart Logic & AI: 5 Questions
 - Advanced Reasoning & HOTS: 5 Questions
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 **Important Note**

The syllabus is based on NCERT Class 8 Mathematics with a strong focus on algebra, application, and analytical reasoning. The Smart Logic & AI Awareness section is designed to build future-ready thinking without requiring any additional preparation.