



- AI & Future Skills Integration

CLASS-7

Syllabus and Exam Pattern

● SECTION A: NUMBER SYSTEM & OPERATIONS (20%)

1. Integers

- Properties of integers
- Operations (addition, subtraction, multiplication, division)
- Word problems

2. Fractions & Decimals

- All operations (addition, subtraction, multiplication, division)
- Conversion and simplification
- Application-based problems

◆ SECTION B: ALGEBRA (20%)

1. Algebraic Expressions

- Terms, coefficients
- Simplification
- Addition and subtraction

2. Linear Equations

- Simple equations in one variable
 - Application-based problems
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● SECTION C: RATIO, PROPORTION & PERCENTAGE (15%)

1. Ratio & Proportion

- Direct proportion
- Application problems

2. Percentage

- Conversion (fraction ↔ percentage)
 - Real-life applications (discount, profit-loss basics)
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● SECTION D: GEOMETRY & MENSURATION (15%)

1. Geometry

- Lines and angles
- Properties of triangles
- Congruence (basic understanding)

2. Mensuration

- Perimeter and area of:
 - Rectangle
 - Square
 - Triangle
 - Circle (basic introduction)
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◆ SECTION E: DATA HANDLING & SIMPLE PROBABILITY (10%)

1. Data Handling

- Mean, median, mode
- Bar graphs and interpretation

2. Probability (Basic)

- Simple probability concepts
 - Likely/unlikely events
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● SECTION F: RATIONAL NUMBERS & EXPONENTS (5%)

1. Rational Numbers (Introduction)

- Basic operations

2. Exponents (Basic Laws)

- Simple expressions
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 SECTION G: SMART LOGIC & AI AWARENESS (10%)

(No specific study required)

1. Pattern Recognition

- Number and algebraic patterns
- Series completion

2. Logical & Analytical Thinking

- Multi-step reasoning
- Problem-solving strategies

3. AI Thinking (Conceptual)

- Understanding data and patterns
 - Step-based decision making
 - Real-life applications of AI systems
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 SECTION H: ADVANCED REASONING & HOTS (5%)

- Number series (advanced)
 - Coding-decoding (number/algebra based)
 - Logical puzzles
 - Analytical reasoning
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 Weightage Structure

Section	Area	Weightage
A	Number System & Operations	20%
B	Algebra	20%
C	Ratio, Proportion & Percentage	15%

Section	Area	Weightage
D	Geometry & Mensuration	15%
E	Data Handling & Probability	10%
F	Rational Numbers & Exponents	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 7 Mathematics with a strong focus on algebra, application, and analytical reasoning. The Smart Logic & AI Awareness section is designed to enhance future-ready thinking without requiring additional preparation.