International Math Olympiad Handbook – Grade 3

This handbook covers topics for Grade 3 students (Age 8–9).

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Introduction

Grade 3 students develop problem-solving skills with multiplication, division, fractions, basic geometry, and begin logical reasoning for Olympiad-style thinking.

Curriculum Topics

- Numbers up to 10,000
- Addition, Subtraction, Multiplication, Division
- Fractions and Decimals (0.1, 0.5)
- Geometry (Angles, Perimeter, Area of simple shapes)
- Time and Calendar
- Money (advanced)
- Word Problems
- Introduction to Patterns and Logical Reasoning

Detailed Explanations with Examples

- **Numbers:** Read and write numbers up to 10,000.
  Example: 3,245 = 3000 + 200 + 40 + 5
- **Addition/Subtraction:** Larger numbers.
  Example: 1234 + 2456 = 3690
- **Multiplication/Division:** 1-digit and 2-digit numbers.
  Example: 12 × 11 = 132, 144 ÷ 12 = 12
- **Fractions/Decimals:** Simple fractions and decimals.
  Example: 0.5 + 0.25 = 0.75
- **Geometry:** Basic shapes, angles, perimeter, area.
  Example: Perimeter of rectangle 5 cm × 3 cm = 16 cm
- **Time and Calendar:** Read clocks and dates.
  Example: What day is 3 days after Monday?
- **Word Problems:** Solve 2-step problems.
  Example: 15 apples, eat 7, buy 10 more, how many now?
- **Patterns and Logical Reasoning:** Find the missing number or shape.
  Example: 2, 4, 6, ?, 10 → ? = 8

Practice Problems

1. 2345 + 4567 = ?
2. 5000 - 2750 = ?
3. 12 × 11 = ?
4. 144 ÷ 12 = ?
5. 0.5 + 0.25 = ?
6. Find perimeter of rectangle: 8 cm × 5 cm
7. Word problem: 20 - 7 + 5 = ?
8. Pattern: 3, 6, 9, ?, 15

Summary & Key Formulas

- Addition: a + b
- Subtraction: a - b
- Multiplication: a × b
- Division: a ÷ b
- Fractions: 1/2, 1/3, 1/4
- Decimals: 0.1, 0.5
- Perimeter: sum of sides
- Area (rectangle): length × width