ICSE Class 8 Mathematics

Worksheet 1: Rational Numbers

1   Simplify: $(-3/4) + (5/6) - (7/12)$

2   Find the reciprocal of $-15/8$.

3   Arrange in ascending order: $3/5$, $-2/3$, $7/10$, $-1/2$.

4   Verify whether 0 is a rational number.

5   Find five rational numbers between -2 and -1.

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Worksheet 2: Exponents and Powers

1. Simplify: $2^3 \times 2^\blacksquare \div 2^\blacksquare$

2. Evaluate: $(5^2)^3$

3. Express 0.00045 in standard form.

4. Find the value of: $(-3)^\blacksquare$.

5. Simplify: $(a^\blacksquare \times a^3) \div a^\blacksquare$.

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Worksheet 3: Algebraic Expressions

1 Add: $(3x^2 - 5x + 7)$ and $(-2x^2 + 4x - 9)$.

2 Subtract: $(7a - 4b + 3)$ from $(10a + 2b - 5)$.

3 Simplify: $4x(2x - 3) - 3x(x - 5)$.

4 Find the value of $2a^2 - 3a + 1$ when $a = -2$.

5 Factorise: $x^2 + 7x + 10$.

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Worksheet 4: Linear Equations

1 Solve: $3x - 7 = 11$.

2 Solve: $5(x - 2) = 3x + 6$.

3 Find x: $7x/3 - 5 = 2$.

4 Solve: $2(x + 4) - 3(x - 1) = 5$.

5 The sum of two consecutive integers is 37. Find the numbers.

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Worksheet 5: Comparing Quantities

1 Find 12% of 450.

2 Express 3:5 as a percentage.

3 Find the simple interest on ■5000 at 8% per annum for 2 years.

4 A shirt marked at ■800 is sold at a discount of 15%. Find the selling price.

5 If CP = ■600 and SP = ■750, find the profit percent.

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Worksheet 6: Direct and Inverse Proportion

1   If 5 books cost ■150, find the cost of 12 books.

2   If 8 men can do a job in 15 days, how long will 12 men take?

3   If $x \propto y$ and $x = 10$ when $y = 2$, find x when $y = 7$.

4   Determine whether the following are in direct or inverse proportion: speed and time for a fixed distance.

5   Complete the table for direct proportion: x: 2, 4, 6; y: 5, __, __.

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Worksheet 7: Geometry (Angles & Triangles)

1 Find the value of x if two complementary angles are (2x + 10)° and (x + 20)°.

2 Find the angles of a triangle in the ratio 2:3:4.

3 State whether a triangle with sides 5 cm, 7 cm, and 10 cm is possible.

4 Find the exterior angle of a triangle if its interior opposite angles are 40° and 55°.

5 Is an equilateral triangle also an isosceles triangle? Justify.

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Worksheet 8: Mensuration

1 Find the area of a rectangle of length 15 cm and breadth 8 cm.

2 Find the perimeter of a square whose side is 9 cm.

3 Find the area of a triangle with base 12 cm and height 7 cm.

4 The radius of a circle is 14 cm. Find its circumference (π = 22/7).

5 Find the area of a circle of diameter 28 cm.

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Worksheet 9: Data Handling

1 Find the mean of: 4, 7, 10, 13, 6.

2 Find the median of: 12, 8, 15, 10, 9.

3 Find the mode of: 3, 5, 3, 8, 5, 3.

4 Draw a bar graph for the data: Marks – 40, 55, 70, 85.

5 State one advantage of a pie chart.

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Worksheet 10: Squares, Cubes & Square Roots

1 Find the square of 27.

2 Find the cube of −4.

3 Find the square root of 144.

4 Find the smallest number by which 180 must be multiplied to make it a perfect square.

5 Find $\sqrt{2025}$.