

Grade 10 - Terminal Exams

Answer Key

Mathematics

Section A: Number Operations

1. Solve the following:

a) $7,834 + 5,978 = 13,812$

b) $9,432 - 6,789 = 2,643$

c) $567 \times 24 = 13,608$

d) $3,696 \div 16 = 231$

e) $5^3 = 125$

2. Arrange the following fractions in ascending order:

$\frac{1}{2}$, $\frac{2}{5}$, $\frac{7}{10}$, $\frac{3}{4}$, $\frac{4}{5}$

Explanation: Converting to decimals: $\frac{1}{2} = 0.5$, $\frac{2}{5} = 0.4$, $\frac{7}{10} = 0.7$, $\frac{3}{4} = 0.75$, $\frac{4}{5} = 0.8$

Section B: Fractions and Decimals

3. Convert the following:

a) $\frac{3}{8}$ to decimal = 0.375

b) 0.75 to fraction in simplest form = $\frac{3}{4}$

c) 0.125 to fraction in simplest form = $\frac{1}{8}$

d) $\frac{7}{20}$ to decimal = 0.35

e) 0.36 to fraction in simplest form = $\frac{9}{25}$

4. Solve the following:

a) $\frac{2}{3} + \frac{1}{6} = \frac{4}{6} + \frac{1}{6} = \frac{5}{6}$

b) $\frac{5}{8} - \frac{1}{4} = \frac{5}{8} - \frac{2}{8} = \frac{3}{8}$

c) $\frac{3}{4} \times \frac{2}{3} = \frac{6}{12} = \frac{1}{2}$

d) $\frac{2}{5} \div \frac{3}{10} = \frac{2}{5} \times \frac{10}{3} = \frac{20}{15} = \frac{4}{3}$

e) $1.25 + 3.75 = 5.00$

Section C: Geometry and Measurement

5. Calculate the perimeter and area of a rectangle with length 12 cm and width 8 cm.

Perimeter = $2(l + w) = 2(12 + 8) = 2(20) = 40$ cm

Area = $l \times w = 12 \times 8 = 96$ cm²

6. Calculate the perimeter and area of a square with side length 9 cm.

Perimeter = $4s = 4 \times 9 = 36$ cm

$$\text{Area} = s^2 = 9^2 = 81 \text{ cm}^2$$

7. A circular garden has a radius of 7 meters. Calculate its circumference and area. (Use $\pi = 22/7$)

$$\text{Circumference} = 2\pi r = 2 \times 22/7 \times 7 = 44 \text{ meters}$$

$$\text{Area} = \pi r^2 = 22/7 \times 7^2 = 22/7 \times 49 = 154 \text{ m}^2$$

Section D: Word Problems

8. Ravi bought $3 \frac{1}{2}$ kg of apples, $2 \frac{3}{4}$ kg of oranges, and $1 \frac{1}{4}$ kg of grapes. What is the total weight of the fruits he bought?

$$\text{Total weight} = 3 \frac{1}{2} + 2 \frac{3}{4} + 1 \frac{1}{4} = 3.5 + 2.75 + 1.25 = 7.5 \text{ kg}$$

9. A rectangular playground is 25 meters long and 15 meters wide. Find the cost of fencing the playground at the rate of ₹125 per meter.

$$\text{Perimeter of playground} = 2(l + w) = 2(25 + 15) = 2(40) = 80 \text{ meters}$$

$$\text{Cost of fencing} = 80 \times 125 = ₹10,000$$

10. Meera had ₹2,500. She spent $\frac{3}{5}$ of her money on books and $\frac{1}{4}$ of the remaining on stationery. How much money does she have left?

$$\text{Money spent on books} = \frac{3}{5} \times 2,500 = 1,500$$

$$\text{Money remaining after buying books} = 2,500 - 1,500 = 1,000$$

$$\text{Money spent on stationery} = \frac{1}{4} \times 1,000 = 250$$

Money left = $1,000 - 250 = ₹750$

End of Answer Key

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