

Chapter – 3 | Proportional Reasoning-2

QUIZ-01

1. Two ratios $a : b$ and $c : d$ are proportional when:

A. $a + d = b + c$
B. $a \times d = b \times c$
C. $a \times b = c \times d$
D. $a - b = c - d$ (B)

Explanation: Cross multiplication is used to verify proportionality.

2. In a map with RF 1 : 60,00,000, 1 cm on the map represents:

A. 6 km
B. 60 km
C. 600 km
D. 6000 km (B)

Explanation: 60,00,000 cm = 60 km.

3. The ratio 8 : 4 : 2 : 1 reduced by half becomes:

A. 4 : 2 : 1 : 0.5
B. 2 : 1 : 1 : 0.5
C. 8 : 2 : 1 : 0.5
D. 4 : 4 : 2 : 1 (A)

Explanation: Each term is divided by 2.

4. Purple paint is mixed in the ratio Red : Blue : White = 2 : 3 : 5. If white paint is 10 litres, blue paint is:

A. 4 litres
B. 5 litres
C. 6 litres
D. 8 litres (C)

Explanation: 5 parts = 10 litres, so 1 part = 2 litres and 3 parts = 6 litres.

5. A triangle has angles in the ratio 1 : 3 : 5. The largest angle is:

A. 20°
B. 40°
C. 60°
D. 100° (D)

Explanation: The angles are 20° , 60° , and 100° .

6. A pie chart represents data using:

A. Rectangles
B. Line segments
C. Sectors of a circle
D. Triangles (C)

Explanation: A pie chart divides a circle into sectors proportional to data values.

7. If 5 workers move 4500 bricks in a day, workers needed to move 18000 bricks in a day are:

A. 10
B. 15
C. 20
D. 25 (C)

Explanation: 18000 is 4 times 4500, so workers needed are $4 \times 5 = 20$.

8. Two quantities x and y are inversely proportional if:

A. $x + y = \text{constant}$
B. $x/y = \text{constant}$
C. $xy = \text{constant}$
D. $x - y = \text{constant}$ (C)

Explanation: In inverse proportion, the product remains constant.

9. If 20 workers complete a road in 4 days, 10 workers will take:

A. 6 days
B. 8 days
C. 10 days
D. 12 days (B)

Explanation: Workers and days are inversely proportional. $20 \times 4 = 10 \times 8$.

10. Two pumps fill a tank in 18 hours. Four pumps will fill it in:

A. 6 hours
B. 8 hours
C. 9 hours
D. 12 hours (C)

Explanation: Doubling the pumps halves the time, so $18 \div 2 = 9$ hours.