

SMART EXAM RESOURCES
STAGE 7 MATHEMATICS
TOPIC QUESTIONS
TOPIC: RATIO-WORKED SOLUTIONS
SET-2

Instructions:

Divide each quantity in the given ratio and provide the individual values.

Exercise Questions

1. \$90; (2:3)
2. \$250; (4:6)
3. 360 kg; (5:4:3)
4. 120 liters; (3:2)
5. 275 m; (7:3)
6. 198 minutes; (4:5:6)
7. 400 kg; (1:3:2)
8. \$144; (5:7:4)
9. 360 cm; (6:5:4)
10. 225 kg; (2:3:5)

Worked Solutions

Solution 1:

\$90; (2:3)

$$\text{Total parts} = 2 + 3 = 5$$

$$\text{Each part} = \$90 \div 5 = \$18$$

$$\text{First share} = 2 \times \$18 = \$36$$

$$\text{Second share} = 3 \times \$18 = \$54$$

Solution 2:

\$250; (4:6)

$$\text{Total parts} = 4 + 6 = 10$$

$$\text{Each part} = \$250 \div 10 = \$25$$

$$\text{First share} = 4 \times \$25 = \$100$$

$$\text{Second share} = 6 \times \$25 = \$150$$

Solution 3:

360 kg; (5:4:3)

$$\text{Total parts} = 5 + 4 + 3 = 12$$

$$\text{Each part} = 360 \div 12 = 30 \text{ kg}$$

$$\text{First share} = 5 \times 30 = 150 \text{ kg}$$

$$\text{Second share} = 4 \times 30 = 120 \text{ kg}$$

$$\text{Third share} = 3 \times 30 = 90 \text{ kg}$$

Solution 4:

$$120 \text{ liters; } (3:2)$$

$$\text{Total parts} = 3 + 2 = 5$$

$$\text{Each part} = 120 \div 5 = 24 \text{ liters}$$

$$\text{First share} = 3 \times 24 = 72 \text{ liters}$$

$$\text{Second share} = 2 \times 24 = 48 \text{ liters}$$

Solution 5:

$$275 \text{ m; } (7:3)$$

$$\text{Total parts} = 7 + 3 = 10$$

$$\text{Each part} = 275 \div 10 = 27.5 \text{ m}$$

$$\text{First share} = 7 \times 27.5 = 192.5 \text{ m}$$

$$\text{Second share} = 3 \times 27.5 = 82.5 \text{ m}$$

Solution 6:

$$198 \text{ minutes; } (4:5:6)$$

$$\text{Total parts} = 4 + 5 + 6 = 15$$

$$\text{Each part} = 198 \div 15 = 13.2 \text{ minutes}$$

$$\text{First share} = 4 \times 13.2 = 52.8 \text{ minutes}$$

$$\text{Second share} = 5 \times 13.2 = 66 \text{ minutes}$$

$$\text{Third share} = 6 \times 13.2 = 79.2 \text{ minutes}$$

Solution 7:

$$400 \text{ kg; } (1:3:2)$$

$$\text{Total parts} = 1 + 3 + 2 = 6$$

$$\text{Each part} = 400 \div 6 = 66.67 \text{ kg}$$

$$\text{First share} = 1 \times 66.67 = 66.67 \text{ kg}$$

$$\text{Second share} = 3 \times 66.67 = 200 \text{ kg}$$

$$\text{Third share} = 2 \times 66.67 = 133.33 \text{ kg}$$

Solution 8:

$$\$144; (5:7:4)$$

$$\text{Total parts} = 5 + 7 + 4 = 16$$

$$\text{Each part} = 144 \div 16 = 9$$

$$\text{First share} = 5 \times 9 = \$45$$

$$\text{Second share} = 7 \times 9 = \$63$$

$$\text{Third share} = 4 \times 9 = \$36$$

Solution 9:

$$360 \text{ cm}; (6:5:4)$$

$$\text{Total parts} = 6 + 5 + 4 = 15$$

$$\text{Each part} = 360 \div 15 = 24 \text{ cm}$$

$$\text{First share} = 6 \times 24 = 144 \text{ cm}$$

$$\text{Second share} = 5 \times 24 = 120 \text{ cm}$$

$$\text{Third share} = 4 \times 24 = 96 \text{ cm}$$

Solution 10:

$$225 \text{ kg}; (2:3:5)$$

$$\text{Total parts} = 2 + 3 + 5 = 10$$

$$\text{Each part} = 225 \div 10 = 22.5 \text{ kg}$$

$$\text{First share} = 2 \times 22.5 = 45 \text{ kg}$$

$$\text{Second share} = 3 \times 22.5 = 67.5 \text{ kg}$$

$$\text{Third share} = 5 \times 22.5 = 112.5 \text{ kg}$$