

Q1: If $4 : 7 = 20 : x$, then the value of x is:

- (a) 25
- (b) 30
- (c) 35
- (d) 40

Solution:

$$\frac{4}{7} = \frac{20}{x} \implies x = \frac{7 \times 20}{4} = 35$$

Answer: C

Q2: The ratio of 30 minutes to 1.5 hours is:

- (a) 1:2
- (b) 1:3
- (c) 2:3
- (d) 3:2

Solution:

$$1.5 \text{ hours} = 90 \text{ minutes}$$

$$\text{Ratio} = \frac{30}{90} = \frac{1}{3}$$

Answer: B

Q3: 18% of 500 is equal to:

- (a) 70
- (b) 80
- (c) 90
- (d) 100

Solution:

$$18\% \text{ of } 500 = \frac{18}{100} \times 500 = 90$$

Answer: C

Q4: What percentage is 45 of 150?

- (a) 20%
- (b) 25%
- (c) 30%
- (d) 35%

Solution:

$$\frac{45}{150} \times 100 = 30\%$$

Answer: C

Q5: A number is decreased by 25% and then increased by 25%. The net change in the number is:

- (a) 0%
- (b) 6.25% decrease
- (c) 6.25% increase
- (d) 25% decrease

Solution: Let the number be x .

$$x \times 0.75 \times 1.25 = 0.9375x$$

$$\text{Net change} = (1 - 0.9375) \times 100 = 6.25\% \text{ decrease}$$

Answer: B

Q6: The price of a shirt is increased by 12%. If the original price was Rs.300, the new price is:

- (a) Rs.320
- (b) Rs.336
- (c) Rs.340
- (d) Rs.350

Solution:

$$\text{New price} = 300 \times 1.12 = 336$$

Answer: B

Q7: If the cost price of a book is Rs.120 and the selling price is Rs.150, the profit percentage is:

- (a) 20%
- (b) 25%
- (c) 30%
- (d) 35%

Solution:

$$\text{Profit} = 150 - 120 = 30$$

$$\text{Profit percentage} = \frac{30}{120} \times 100 = 25\%$$

Answer: B

Q8: A trader sells a watch for Rs.800 at a loss of 20%. The cost price of the watch is:

- (a) Rs.900
- (b) Rs.1000
- (c) Rs.1100
- (d) Rs.1200

Solution:

$$\text{Selling price} = 0.80 \times \text{Cost price} \implies 800 = 0.80 \times \text{Cost price}$$

$$\text{Cost price} = \frac{800}{0.80} = 1000$$

Answer: B

Q9: The simple interest on Rs.800 for 3 years at 7% per annum is:

- (a) Rs.140
- (b) Rs.168
- (c) Rs.180
- (d) Rs.200

Solution:

$$\text{Simple Interest} = \frac{800 \times 7 \times 3}{100} = 168$$

Answer: B

Q10: If the principal is Rs.2000, the rate is 8% per annum, and the time is 2.5 years, the simple interest is:

- (a) Rs.300
- (b) Rs.320
- (c) Rs.350
- (d) Rs.400

Solution:

$$\text{Simple Interest} = \frac{2000 \times 8 \times 2.5}{100} = 400$$

Answer: D

Q11: In a class of 50 students, 16% are absent. The number of students present is:

- (a) 38
- (b) 40
- (c) 41
- (d) 42

Solution:

$$\text{Absent students} = 0.16 \times 50 = 8$$

$$\text{Present students} = 50 - 8 = 42$$

Answer: D

Q12: A train travels 120 km in 2 hours. If it travels at the same speed, the distance covered in 90 minutes is:

- (a) 70 km
- (b) 80 km
- (c) 90 km
- (d) 100 km

Solution:

$$\text{Speed} = \frac{120}{2} = 60 \text{ km/h}$$
$$\text{Distance} = 60 \times \frac{90}{60} = 90 \text{ km}$$

Answer: C

Q13: The ratio of apples to oranges in a basket is 5:3. If there are 40 fruits in total, the number of oranges is:

- (a) 12
- (b) 15
- (c) 18
- (d) 20

Solution:

$$\text{Total parts} = 5 + 3 = 8$$
$$\text{Number of oranges} = \frac{3}{8} \times 40 = 15$$

Answer: B

Q14: A shopkeeper offers a 10% discount on a pair of shoes priced at Rs.800. The selling price of the shoes is:

- (a) Rs.680
- (b) Rs.700
- (c) Rs.720
- (d) Rs.750

Solution:

$$\text{Selling price} = 800 \times 0.90 = 720$$

Answer: C

Q15: The population of a town increases by 5% every year. If the current population is 20,000, the population after 2 years will be:

- (a) 21,000
- (b) 22,000
- (c) 22,050
- (d) 22,500

Solution:

$$\text{Population after 2 years} = 20000 \times (1.05)^2 = 20000 \times 1.1025 = 22050$$

Answer: C