

EXERCISE

1

Profit and Loss

1. A man buys an article for Rs 27.50 and sells it for Rs 28.60. Find the gain percent?

- (a) 4% (b) 3%
(c) 5% (d) 10%

Answer: a)

$$CP = \text{Rs. } 27.50, SP = 28.60$$

$$\text{Then Gain} = SP - CP = 28.60 - 27.50 = \text{Rs. } 1.10$$

$$\text{Since, Gain\%} = \frac{\text{gain}}{CP} \times 100\%$$

$$\Rightarrow \text{Gain\%} = \frac{1.10 \times 100}{27.50} = 4\%$$

2. Find CP when SP = Rs 40.60, gain= 16%?

- (a) Rs 35 (b) Rs 50
(c) Rs 75 (d) Rs 89

Answer: a)

$$CP = \frac{100 \times SP}{100 + \text{gain\%}}$$

$$\Rightarrow CP = \frac{100 \times 40.60}{100 + 16} = \text{Rs. } 35$$

3. Find CP when SP= Rs 51.70, loss= 12%

- (a) Rs 58.75 (b) Rs 62.25
(c) Rs 65 (d) Rs 69.27

Answer: a)

$$CP = \frac{100 \times SP}{100 - \text{loss\%}}$$

$$\Rightarrow CP = \frac{100 \times 51.70}{100 - 12} = \text{Rs. } 58.75$$

4. A discount dealer professes to sell his goods at cost price but uses a weight of 960 gms instead of a KG weight. Find his gain?

- (a) 27/4% (b) 8/3%
(c) 25/6% (d) 21/4%

Answer: c)

Here, True weight = 1000g.

False weight = 960g.

Error change = (1000-960)g. = 40g.

$$\Rightarrow \text{Gain\%} = \frac{25}{\text{True weight} - \text{Error}} \times 100\%$$

$$= \frac{40}{1000 - 40} \times 100\% = \frac{25}{6}\%$$

5. A man sold two cows of Rs 1995 each. On one he lost 10%. What his gain or loss percent?

- (a) 4% (b) 2 %
(c) 0.5% (d) 1%

Answer: d)

Here, since both gain and loss percent is same, hence the resultant value would be loss percent only.

$$\Rightarrow \text{Loss\%} = \frac{a}{100} \text{ [where } a = 10\%] = 1\%$$

6. Two discounts of 20% and 40%, equal to a single discount of?

- (a) 48% (b) 53%
(c) Rs 52% (d) 60%

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Answer: c)

Using net discount formula

$$\Rightarrow \left[a + b - \frac{ab}{100} \right] \%$$

Here, a = 40%, b = 20%

Applying both values in above formula:

$$\Rightarrow \left[10 + 20 - \frac{40 \times 20}{100} \right] \% = 52\%$$

7. The price of 12 chairs and 8 tables is Rs 676. What is the price of 21 chairs and 14 tables?

- (a) 1183 (b) 4732
(c) 1180 (d) Can't be determined

Answer: a)

Here, cost of 12 chairs and 8 tables = Rs. 676

On dividing above equation by 4

$$\Rightarrow \text{Cost of 3 chairs and 2 tables} = \text{Rs. } 676 \times \frac{1}{4}$$

Now multiply it by 7

\Rightarrow Cost of 21 chairs and 14 tables

$$= \text{Rs. } 676 \times \frac{7}{4} = \text{Rs. } 1183$$

8. Aditya purchases a book with a 20% discount on the marked price. How much did he pay if the book marked was 500?

- (a) 400 (b) 300
(c) Rs 200 (d) 500

Answer: a)

Here, MP = Rs. 500

Now since we need discount of 20%

$$\Rightarrow \text{Amount paid} = \text{Rs. } \left[500 - 500 \times \frac{20}{100} \right]$$

= Rs. 400

9. A vendor bought toffees 6 for a rupee. How many for a rupee must he sell to gain 20%?

- (a) 3 (b) 04
(c) 5 (d) 6
(e) None of these

Answer: c)

$$\text{CP of 6 toffees} = \text{Rs. } 1 \quad \text{CP of 1 toffee} = \text{Rs. } \frac{1}{6}$$

SP of x toffees = Rs. 1 (where x is no. of toffees to sell)

$$\text{SP of 1 toffee} = \text{Rs. } \frac{1}{x}$$

$$\text{Gain\%} = \frac{20}{100} = \frac{\frac{1}{x} - \frac{1}{6}}{\frac{1}{6}} \Rightarrow \frac{1}{5} = \frac{6-x}{x} \Rightarrow x = 5$$

10. If 11 mango are bought for Rs 10 and sold at 10 for Rs 11. What was Gain or Loss?

- (a) 24% (b) 21%
(c) 26% (d) 25%
(e) None of these

Answer: b)

CP of 11 Mangoes = Rs. 10

$$\Rightarrow \text{CP of 11 Mangoes} = \text{Rs. } \left[10 \times \frac{20}{100} \right] =$$

$$\text{Rs. } \frac{100}{11}$$

SP of 10 Mangoes = Rs. 11

$$\% \text{ profit} = \frac{11 - \frac{100}{11}}{\frac{100}{11}} \times 100 \% = 21\%$$