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(Affiliated to CBSE up to +2 Level)

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Q. 1: A man got a 10% increase in his salary. If his new salary is Rs 1,54,000, find his original salary.

SOLUTION : Let the original salary be x . It is given that the new salary is Rs 1,54,000.

Original salary + Increment = New salary

However, it is given that the increment is 10% of the original salary.

Therefore,

$$x + \frac{10}{100} \times x = 154000$$

$$\frac{110x}{100} = 154000$$

$$x = \left(154000 \times \frac{100}{110} \right)$$

$$x = 140000$$

Thus, the original salary was Rs 1,40,000.

Q. 2: On Sunday 845 people went to the Zoo. On Monday only 169 people went. What is the per cent decrease in the people visiting the zoo on Monday?

SOLUTION: It is given that on Sunday, 845 people went to the zoo and on Monday, 169 people went.

Decrease in the number of people = $845 - 169 = 676$

$$\begin{aligned} \text{Percentage decrease} &= \left(\frac{\text{Decrease in the number of people} \times 100}{\text{Number of people who went to zoo on sunday}} \right) \% \\ &= \left(\frac{676}{845} \times 100 \right) \% \\ &= 80\% \end{aligned}$$

Answer

Q. 3: A shopkeeper buys 80 articles for Rs 2,400 and sells them for a profit of 16%. Find the selling price of one article.

SOLUTION: It is given that the shopkeeper buys 80 articles for Rs 2,400.

$$\text{Cost of one article} = \text{Rs } \frac{2400}{80} = \text{Rs } 30$$

Profit percent = 16

$$\text{Profit Percent} = \frac{\text{Profit}}{\text{C.P.}} \times 100$$

$$16 = \frac{\text{Profit}}{\text{Rs } 30} \times 100$$

$$\text{Profit} = \text{Rs} \left(\frac{16 \times 30}{100} \right) = \text{Rs } 4.80$$

Selling price of one article = C.P. + Profit = Rs (30 + 4.80) = Rs 34.80

Q.4: The cost of an article was Rs 15,500. Rs 450 were spent on its repairs. If it is sold for a profit of 15%, find the selling price of the article.

SOLUTION: Total cost of an article = Cost + Overhead expenses
= Rs 15500 + Rs 450
= Rs 15950

$$\text{Profit \%} = \frac{\text{Profit}}{\text{C.P.}} \times 100$$

$$15 = \frac{\text{Profit}}{\text{Rs } 15950} \times 100$$

$$\text{Profit} = \text{Rs} \left(\frac{15950 \times 15}{100} \right) = \text{Rs } 2392.50$$

∴ Selling price of the article = C.P. + Profit = Rs (15950 + 2392.50)
= Rs 18342.50

Q. 5: A VCR and TV were bought for Rs 8,000 each. The shopkeeper made a loss of 4% on the VCR and a profit of 8% on the TV. Find the gain or loss percent on the whole transaction.

SOLUTION: C.P. of a VCR = Rs 8000

The shopkeeper made a loss of 4 % on VCR.

This means if C.P. is Rs 100, then S.P. is Rs 96.

$$\text{When C.P. is Rs } 8000, \text{ S.P.} = \text{Rs} \left(\frac{96}{100} \times 8000 \right) = \text{Rs } 7680$$

C.P. of a TV = Rs 8000

The shopkeeper made a profit of 8 % on TV.

This means that if C.P. is Rs 100, then S.P. is Rs 108.

When C.P. is Rs 8000, S.P. = $\text{Rs} \left(\frac{108}{100} \times 8000 \right) = \text{Rs } 8640$

Total S.P. = Rs 7680 + Rs 8640 = Rs 16320

Total C.P. = Rs 8000 + Rs 8000 = Rs 16000

Since total S.P. > total C.P., there was a profit.

Profit = Rs 16320 – Rs 16000 = Rs 320

$$\begin{aligned}\text{Profit \%} &= \frac{\text{Profit}}{\text{C.P.}} \times 100 \\ &= \frac{320}{16000} \times 100 = 2\%\end{aligned}$$

Therefore, the shopkeeper had a gain of 2% on the whole transaction.

Do Your Self

Q. 6: During a sale, a shop offered a discount of 10% on the marked prices of all the items. What would a customer have to pay for a pair of jeans marked at Rs 1450 and two shirts marked at Rs 850 each?

Q. 7: A milkman sold two of his buffaloes for Rs 20,000 each. On one he made a gain of 5% and on the other a loss of 10%. Find his overall gain or loss.

Q. 8: The price of a TV is Rs 13,000. The sales tax charged on it is at the rate of 12%. Find the amount that Vinod will have to pay if he buys it,

Q. 9: Arun bought a pair of skates at a sale where the discount given was 20%. If the amount he pays is Rs 1,600, find the marked price.