



Exercise 10B

Number of votes in favour of candidate A = 60% of 48000

$$= \left(\frac{60}{100} \times 48000 \right) = 28800$$

\therefore Number of votes received by candidate B = $(48000 - 28800) = 19200$

Hence, candidate B received 19,200 votes.

Q16

Answer :

Let us assume that the original price of the shirt is Rs x .

Discount on the shirt = 12%

So, value of discount on the shirt = 12% of Rs x

$$= \text{Rs} \left(\frac{12}{100} \times x \right) = \text{Rs} \left(\frac{12x}{100} \right)$$

Value of the shirt after discount = Rs $\left(x - \frac{12x}{100} \right)$

$$= \text{Rs} \left(\frac{100x - 12x}{100} \right) = \text{Rs} \left(\frac{88x}{100} \right)$$

Present price of the shirt = Rs 1188

Then, Rs $\left(\frac{88x}{100} \right) = \text{Rs} 1188$

$$\Rightarrow 88x = (1188 \times 100)$$

$$\Rightarrow 88x = 118800$$

$$\therefore x = \left(\frac{118800}{88} \right) = 1350$$

Hence, the original price of the shirt is Rs 1350.

Q17

Answer :

Let us assume that the original price of the sweater is Rs. x

Increased percentage = 8%

So, value of increase on the sweater = 8% of Rs x

$$= \text{Rs} \left(\frac{8}{100} \times x \right) = \text{Rs} \left(\frac{2x}{25} \right)$$

$$\text{Increased price of the sweater} = \text{Rs} \left(x + \frac{2x}{25} \right)$$

$$= \text{Rs} \left(\frac{25x + 2x}{25} \right) = \text{Rs} \left(\frac{27x}{25} \right)$$

However, increased price of the sweater = Rs 1566

$$\text{Then, Rs} \left(\frac{27x}{25} \right) = \text{Rs } 1566$$

$$\therefore x = \left(\frac{1566 \times 25}{27} \right) = 1450$$

Hence, the original price of the sweater is Rs 1450

Q18

Answer :

Let the income of the man be Rs x .

Then, income spent = 80% of Rs. x

$$= \text{Rs} \left(\frac{80}{100} \times x \right) = \text{Rs} \left(\frac{80x}{100} \right) = \text{Rs} \left(\frac{4x}{5} \right)$$

$$\text{Amount left after all the expenditure} = \text{Rs} \left(x - \frac{4x}{5} \right) = \text{Rs} \left(\frac{5x - 4x}{5} \right) = \text{Rs} \left(\frac{x}{5} \right)$$

Amount given to the charity = 10% of Rs $\left(\frac{x}{5} \right)$

$$= \text{Rs} \left(\frac{10}{100} \times \frac{x}{5} \right) = \text{Rs} \left(\frac{10x}{500} \right) = \text{Rs} \left(\frac{x}{50} \right)$$

$$\text{Amount left after the charity} = \text{Rs} \left(\frac{x}{5} - \frac{x}{50} \right)$$

$$= \text{Rs} \left(\frac{10x - x}{50} \right) = \text{Rs} \left(\frac{9x}{50} \right)$$

Now, we have:

$$\text{Rs} \left(\frac{9x}{50} \right) = \text{Rs } 46260$$

$$\therefore x = \text{Rs} \left(\frac{46260 \times 50}{9} \right) = \text{Rs } 257000$$

Hence, the income of the man is Rs 2,57,000.

Q19

Answer :

Let the number be 100.

Increase in the number = 20%

$$\text{Increased number} = (100 + 20) = 120$$

Now, decrease in the number = (20% of 120)

$$= \left(\frac{20}{100} \times 120 \right) = 24$$

$$\text{New number} = (120 - 24) = 96$$

$$\text{Net decrease} = (100 - 96) = 4$$

$$\text{Net decrease percentage} = \left(\frac{4}{100} \times 100 \right) = 4$$

Hence, the net decrease is 4%.

Q20

Answer :

Let the original salary be Rs 100.

Increase in it = 20%

$$\text{Salary after increment} = \text{Rs} (100 + 20) = \text{Rs } 120$$

$$\text{To restore the original salary, reduction required} = \text{Rs} (120 - 100) = \text{Rs } 20$$

$$\text{Reduction on Rs } 120 = \text{Rs } 20$$

$$\therefore \text{Reduction percentage} = \left(\frac{20}{120} \times 100 \right) = \left(\frac{100}{6} \right) = 16 \frac{2}{3}$$

Hence, the required reduction on the new salary is $16 \frac{2}{3} \%$.

Q21

Answer :

Total cost of the property = Rs 540000

Commission on the first Rs 200000 = 2% of Rs 200000

$$= \left(\frac{2}{100} \times 200000 \right) = \text{Rs } 4000$$

Commission on the next Rs 200000 = 1% of Rs 200000

$$= \left(\frac{1}{100} \times 200000 \right) = \text{Rs } 2000$$

Remaining amount = Rs (540000 - 400000) = Rs 140000

∴ Commission on Rs 140000 = 0.5% of Rs 140000

$$\begin{aligned} &= \text{Rs } \left(\frac{0.5}{100} \times 140000 \right) \\ &= \text{Rs } \left(\frac{5}{1000} \times 140000 \right) = \text{Rs } 700 \end{aligned}$$

Thus, total commission on the property worth Rs 540000 = Rs (4000 + 2000 + 700)

$$= \text{Rs } 6700$$

Hence, the commission of the property dealer on the property that has been sold for Rs 540000 is Rs 6700.

*****END*****