Exercise 10B

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

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

∴ Number of votes received by candidate B = (48000 − 28800) = 19200

Hence, candidate B recieved 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

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

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

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

Present price of the shirt = Rs 1188

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

⇒ 88x = (1188 × 100)

⇒ 88x = 118800

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

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

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

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

However, increased price of the sweater = Rs 1566

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

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

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

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

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

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

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

Now, we have:

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

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

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

Q19

Answer :

Let the number be 100.

Increase in the number = 20%

Increased number = (100 + 20) =120

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

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

New number = (120 − 24) = 96

Net decrease = (100 − 96) = 4

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%

Salary after increment = Rs (100 + 20) = Rs 120

To restore the original salary, reduction required = Rs (120 − 100) = Rs 20

Reduction on Rs 120 = Rs 20

$\therefore$ 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

$$= \text{Rs } \left(\frac{0.5}{100} \times 140000 \right)$$

$$= \text{Rs } \left(\frac{5}{1000} \times 140000 \right) = \text{Rs } 700$$

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 *********