



Percentage Ex 12.2 Q19

Answer :

It is given that the value of the machine depreciates by 5% every year.

Present value of the machine = Rs 100000

$$\therefore \text{For the first year, } 5\% \text{ of } 100000 = \frac{5}{100} \times 100000 \\ = \text{Rs } 5000$$

$$\therefore \text{Value of the machine after one year} = 100000 - 5000 = \text{Rs } 95000$$

Value of the machine in the second year = Rs 95000

$$\therefore 5\% \text{ of } 95000 = \frac{5}{100} \times 95000 \\ = \text{Rs } 4750$$

$$\therefore \text{Value of the machine after 2 years} = 95000 - 4750 = \text{Rs } 90250$$

\therefore After two years, the value of the machine will be Rs 90,250.

Percentage Ex 12.2 Q20

Answer :

Present population = 60000

It increases by 10% annually.

$$\therefore \text{Increase in the population in the first year} = 10\% \text{ of } 60000 = \frac{10}{100} \times 60000 \\ = 6000$$

$$\therefore \text{Population after 1 year} = 60000 + 6000 = 66000$$

$$\text{Increase in the population in the second year, } 10\% \text{ of } 66000 = \frac{10}{100} \times 66000 \\ = 6600$$

$$\text{Thus, population after 2 years} = 66000 + 6600 = 72600$$

Percentage Ex 12.2 Q21

Answer :

Let the population of the town one year ago = x

Now, it is given that population of the town increases by 10% annually.

Present population = $x + 10\%$ of x

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

$$= x + \frac{x}{10}$$

$$= \frac{11x}{10}$$

But present population of the town = 22000

$$\text{So, } \frac{11x}{10} = 22000$$

$$\Rightarrow 11x = 220000$$

$$\Rightarrow x = \frac{220000}{11}$$

$$\Rightarrow x = 20000$$

So, population of the town 1 year ago = 20000

***** END *****