



Compound Interest Ex 14.3 Q4

Answer :

Let the sum be Rs x.

Given :

$$A = \text{Rs } 4913$$

$$R = 12.5\%$$

$$n = 18 \text{ months} = 1.5 \text{ years}$$

We know that :

$$A = P \left(1 + \frac{R}{200} \right)^{2n}$$

$$4,913 = P \left(1 + \frac{R}{200} \right)^{2n}$$

$$4,913 = x \left(1 + \frac{12.5}{200} \right)^3$$

$$4,913 = x \left[(1.0625)^3 \right]$$

$$\begin{aligned} x &= \frac{4,913}{1.1995} \\ &= 4,096 \end{aligned}$$

Thus, the required sum is Rs 4,096.

Compound Interest Ex 14.3 Q5

Answer :

Given :

$$\text{CI} - \text{SI} = \text{Rs } 283.50$$

$$R = 15\%$$

$$n = 3 \text{ years}$$

Let the sum be Rs x.

We know that :

$$\begin{aligned} A &= P \left(1 + \frac{R}{100} \right)^n \\ &= P \left(1 + \frac{R}{100} \right)^n \\ &= x \left(1 + \frac{15}{100} \right)^3 \\ &= x(1.15)^3 \quad \dots (1) \end{aligned}$$

Also,

$$\text{SI} = \frac{\text{PRT}}{100} = \frac{x(15)(3)}{100} = 0.45x$$

$$A = \text{SI} + P = 1.45x \quad \dots (2)$$

Thus, we have :

$$x(1.15)^3 - 1.45x = 283.50 \quad \left[\text{From } (1) \text{ and } (2) \right]$$

$$1.523x - 1.45x = 283.50$$

$$0.070875x = 283.50$$

$$x = \frac{283.50}{0.070875}$$

$$= 4,000$$

Thus, the sum is Rs 4,000.

***** END *****