



Compound Interest Ex 14.2 Q8

**Answer :**

**Given :**

$$P = \text{Rs } 8,000$$

$$R = 10\% \text{ p. a.}$$

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

When compounded half – yearly, we have :

$$\begin{aligned} A &= P \left( 1 + \frac{R}{200} \right)^{2n} \\ &= \text{Rs } 8,000 \left( 1 + \frac{10}{200} \right)^3 \\ &= \text{Rs } 8,000 (1.05)^3 \\ &= \text{Rs } 9,261 \end{aligned}$$

Also,

$$\begin{aligned} CI &= A - P \\ &= \text{Rs } 9,261 - \text{Rs } 8,000 \\ &= \text{Rs } 1,261 \end{aligned}$$

Compound Interest Ex 14.2 Q9

**Answer :**

**Given :**

$$P = \text{Rs } 57,600$$

$$R = 12.5\% \text{ p. a.}$$

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

When the interest is compounded half – yearly, we have :

$$\begin{aligned} A &= P \left( 1 + \frac{R}{200} \right)^{2n} \\ &= \text{Rs } 57,600 \left( 1 + \frac{12.5}{200} \right)^3 \\ &= \text{Rs } 57,600 (1.0625)^3 \\ &= \text{Rs } 69,089.06 \end{aligned}$$

Thus, the required amount is Rs 69,089.06.

Compound Interest Ex 14.2 Q10

**Answer :**

**Given :**

$$P = \text{Rs } 64,000$$

$$R = 5\% \text{ p. a.}$$

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

When the interest is compounded half – yearly, we have :

$$\begin{aligned} A &= P \left( 1 + \frac{R}{200} \right)^{2n} \\ &= \text{Rs } 64,000 \left( 1 + \frac{5}{200} \right)^3 \\ &= \text{Rs } 64,000 (1.025)^3 \\ &= \text{Rs } 68,921 \end{aligned}$$

Also,

$$\begin{aligned} CI &= A - P \\ &= \text{Rs } 68,921 - \text{Rs } 64,000 \\ &= \text{Rs } 4,921 \end{aligned}$$

Thus, the required interest is Rs 4,921.

\*\*\*\*\* END \*\*\*\*\*