Compound Interest Ex 14.3 Q6

Answer :

Let the money borrowed by Rachana be Rs x.
Then, we have :

$$CI = P\left(1+\frac{R}{100}\right)^n - P$$

$$1,290 = x\left[\left(1+\frac{15}{100}\right)^2 - 1\right]$$

$$1,290 = x[0.3225]$$

$$x = \frac{1,290}{0.3225}$$

$$= 4,000$$

Thus, Rachana borrowed Rs $4,000$.

Compound Interest Ex 14.3 Q7

Answer :

Let the time period be n years.
Then, we have :

$$CI = P\left(1+\frac{R}{100}\right)^n - P$$

$$163.20 = 2,000\left(1+\frac{4}{100}\right)^n - 2,000$$

$$2,163.20 = 2,000(1.04)^n$$

$$(1.04)^n = \frac{2,163.20}{2,000}$$

$$(1.04)^n = 1.0816$$

$$(1.04)^n = (1.04)^2$$

On comparing both the sides, we get :

$$n = 2$$

Thus, the required time is two years.

Compound Interest Ex 14.3 Q8

Answer :

Let the time period be n years.

Thus, we have :

$$CI = P\left(1 + \frac{R}{100}\right)^n - P$$

$$6,655 = 5,000\left(1 + \frac{10}{100}\right)^n - 5,000$$

$$11,655 = 5,000(1.10)^n$$

$$(1.1)^n = \frac{11,655}{5,000}$$

$$(1.1)^n = 2.331$$

$$(1.1)^n = (1.1)^3$$

On comparing both the sides, we get :

$$n = 3$$

Thus, the required time is three years.

********** END **********