Compound Interest Ex 14.3 Q21

Answer :

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

$$13,230 = 12,000\left(1 + \frac{5}{100}\right)^n$$

$$(1.05)^n = \frac{13,230}{12,000}$$

$$(1.05)^n = 1.1025$$

$$(1.05)^n = (1.05)^2$$

On comparing both the sides, we get :

$n = 2$

Thus, the value of n is two years.

Compound Interest Ex 14.3 Q22

Answer :

Let the rate percent be R.

We know that :

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

$$410 = 4,000\left(1+\frac{R}{100}\right)^2 - 4,000$$

$$4,410 = 4,000\left(1+\frac{R}{100}\right)^2$$

$$\left(1+\frac{R}{100}\right)^2 = \frac{4,410}{4,000}$$

$$\left(1+\frac{R}{100}\right)^2 = 1.1025$$

$$\left(1+\frac{R}{100}\right)^2 = (1.05)^2$$

$$1+\frac{R}{100} = 1.05$$

$$\frac{R}{100} = 0.05$$

$$R = 5$$

Thus, the required rate percent is 5.

Compound Interest Ex 14.3 Q23

Answer :

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

$$10,404 = P\left(1+\frac{2}{100}\right)^2$$

$$10,404 = P(1.02)^2$$

$$P = \frac{10,404}{1.0404}$$

$$P = 10,000$$

Thus, the required sum is Rs 10,000.

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