



Compound Interest Ex 14.3 Q24

Answer :

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

$$1852.20 = 1600 \left(1 + \frac{5}{100} \right)^n$$

$$\frac{1852.20}{1600} = (1.05)^n$$

$$(1.05)^n = 1.157625$$

$$(1.05)^n = (1.05)^3$$

On comparing both the sides, we get :

$$n = 3$$

Thus, the required time is three years.

Compound Interest Ex 14.3 Q25

Answer :

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

$$1102.50 = 1000 \left(1 + \frac{R}{100} \right)^2$$

$$\frac{1102.50}{1000} = (1 + 0.01R)^2$$

$$(1 + 0.01R)^2 = 1.1025$$

$$(1 + 0.01R)^2 = (1.05)^2$$

On comparing both the sides, we get :

$$1 + 0.01R = 1.05$$

$$0.01R = 0.05$$

$$R = 5$$

Thus, the required rate percent is 5.

Compound Interest Ex 14.3 Q26

Answer :

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

$$\Rightarrow 378 = 1,800 \left(1 + \frac{10}{100} \right)^n - 1,800$$

$$1,800 \left(1 + \frac{10}{100} \right)^n = 2,178$$

$$\left(1 + \frac{10}{100} \right)^n = \frac{2,178}{1,800}$$

$$(1.1)^n = 1.21$$

$$(1.1)^n = (1.1)^2$$

On comparing both the sides, we get :

$$n = 2$$

Thus, the required time is two years.

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