Compound Interest Ex 14.4 Q13

Answer :

$$\text{Population after three years} = \mathrm{P}\left(1+\frac{\mathrm{R}}{100}\right)^3$$

$$175,760 = \mathrm{P}\left(1+\frac{40}{1000}\right)^3$$

$$175,760 = \mathrm{P}(1.04)^3$$

$$\mathrm{P} = \frac{175,760}{1.124864}$$

$$= 156,250$$

Thus, the population three years ago was $156,250$.

Compound Interest Ex 14.4 Q14

Answer :

$$\text{Production after three years} = \mathrm{P}\left(1+\frac{\mathrm{R}_1}{100}\right)^2\left(1-\frac{\mathrm{R}_2}{100}\right)$$

$$= 8,000\left(1+\frac{15}{1,000}\right)^2\left(1-\frac{5}{100}\right)$$

$$= 8,000(1.15)^2(0.95)$$

$$= 10,051$$

Thus, the production after three years will be $10,051$.

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