

Maths

1. $30000 + 4347 = ₹ 34,347$
 $\Rightarrow 34347 = 30000 \left(1 + \frac{7}{100}\right)^t$

$$\Rightarrow \frac{11449}{10000} = \left(\frac{107}{100}\right)^t$$

$$\Rightarrow \left(\frac{107}{100}\right)^2 = \left(\frac{107}{100}\right)^t$$

$$t = 2$$

2) $P = ₹ 16000$

$$r = 20\%$$

$$P \cdot q = 5\%$$

$$y = \frac{q}{12} = \frac{5\%}{12} \times 4 = 3 \text{ quarters}$$

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

$$A = 16000 \left(1 + \frac{5}{100}\right)^3$$

$$= 16000 \times \frac{21 \times 21 \times 21}{8000}$$

$$= ₹ 18522$$

$$C^e = 18522 - 16000 = ₹ 2522$$

3. $5000 \times \left(1 + \frac{4}{100}\right) \times \left(1 + \frac{1}{2} \times \frac{4}{1000}\right)$

$$= ₹ 5304$$

$$= 5000 \left(1 + \frac{2}{100}\right)^3$$

$$= 2.04$$

4. 24.65

$$5. 8000 \times \left[\frac{1 + \frac{5}{100}}{1} \right]^3 = 29261$$

$$6. \left(7350 \times \frac{36}{49} \right) = 5400$$

$$7. P = \left(\left(\frac{21}{20} \right)^4 - 1 - \frac{1}{5} \right) = 124.05$$

$$P = \left[\frac{194481 - 160000 - 32000}{160000} \right] = 124.05$$

$$P = \frac{2481}{160000} = 124.05$$

$$P = ₹ 8000$$

8) 63,100

$$9) 1800 \left(\frac{1 + R^2 - 10000 - 200R}{10000} \right) = 405$$

$$R = 15\%$$

$$10) ₹ 1331 = 1000 \left[1 + \left(\frac{10}{100} \right)^n \right]^n$$

$$\Rightarrow \frac{1331}{1000} = \left(\frac{11}{10} \right)^n$$

$$\Rightarrow n = 3 \text{ years}$$