

5. The current value of a plot is ₹ 5,00,000. If price increases by 5% each year, what will be the value of plot after two years?

यदि किसी जमीन का वर्तमान मूल्य ₹ 5,00,000 है। यदि प्रति वर्ष मूल्य में 5% का वृद्धि होता है, तो 2 वर्ष बाद उस जमीन का मूल्य क्या होगा?

- ☒ (A) ₹ 5,51,250 (B) ₹ 5,50,000
 (C) ₹ 5,00,000 (D) None of these

$$\left. \begin{array}{l} r \rightarrow 5\% \\ t \rightarrow 2 \text{ वर्ष} \end{array} \right\} C.I = 10.25\%$$

$$500000 + 51250 \\ = 551250 ₹$$

$$\frac{500000 \times 10.25}{100 \times 100} = \boxed{51250}$$

$$500000 \times \frac{110.25}{100}$$

6. What will be the compound interest on ₹ 240 for 2 years, if the rate of interest for 1st year is $2\frac{1}{2}\%$ & 5% for the 2nd year?

₹ 240 की राशि पर पहले वर्ष में $2\frac{1}{2}\%$ और दूसरे वर्ष में 5% की वार्षिक दर पर चक्रवृद्धि ब्याज पर कितनी हो जाएगी?

(A) ₹ 258

(B) ₹ 352

(C) ₹ 260.30

~~(D)~~ ₹ 258.30

$$C.I \rightarrow \left(A + B + \frac{A \times B}{100} \right) \%$$

$$= 2.5 + 5 + \frac{2.5 \times 5}{100}$$

$$= 7.5 + \frac{12.5}{100}$$

$$= 7.5 + 0.125$$

$$= 7.625\%$$

$$\begin{array}{r} 7.500 \\ 0.125 \\ \hline 7.625\% \end{array}$$

$$\begin{array}{r} 12 \quad 1.525 \\ 240 \times 7.625 \\ \hline 1800 \\ 5 \\ \hline 18.300 \end{array}$$

$$= 18.300$$

$$= 18.30\%$$

$$A = 240 + 18.30 = 258.30$$

Golden rule

① 2^८ वर्ष

$$C:I \rightarrow 2 : 1$$

② 3^८ वर्ष

$$C:I \rightarrow 3 : 3 : 1$$

③ 4^८ वर्ष

$$C:I \rightarrow 4 : 6 : 4 : 1$$

7. What will be the compound interest on ₹ 2000 for 2 years if the rate of interest is 10% & is compounded half-yearly?

10% वार्षिक चक्रवृद्धि ब्याज की दर पर, ₹ 2000, 2 वर्षों के बाद ब्याज के रूप में कितनी होगी, यदि ब्याज छमाही संयोजित होता हो? ~~दिया है~~

(A) ₹ 431

~~(B) ₹ 431.0125~~

(C) ₹ 343.246

(D) ₹ 440.20

$r \rightarrow \frac{10\%}{2} = 5\%$
 $t \rightarrow 2 \times 2 = 4$ बार

$$\frac{2000 \times 5}{100} = 100$$

$$\frac{100 \times 5}{100} = 5$$

$$\frac{5 \times 5}{100} = 0.25$$

$$\frac{0.25 \times 5}{100} = 0.0125$$

$$\begin{array}{r} C.I \rightarrow \begin{array}{cccc} 4 & 6 & 4 & 1 \\ \times & \times & \times & \times \\ 100 & 5 & 0.25 & 0.0125 \end{array} \\ \hline 400 + 30 + 1 + 0.0125 \end{array}$$

$$C.I = 431.0125 ₹$$

3 वर्ष का C.I

$$C \cdot I \rightarrow 3R \mid 3R^2 \mid R^3$$

↓ ↓
दो अंक दो अंक

$$\begin{array}{c|c|c} 3 \times 1 & 3 \times 1^2 & 1^3 \\ \hline 3R & 3R^2 & R^3 \end{array}$$

3.03 01 %

$$\left. \begin{array}{l} \delta \rightarrow 1\% \\ t \rightarrow 3 \text{ वर्ष} \end{array} \right\} C.I =$$

3×5 3×5^2 5^3
 $3R$ | $3R^2$ | R^3
 75 1 25
 $+1$

1507625 /

ii) $\gamma \rightarrow 2\%$
 $t \rightarrow 3\%$ } C.I = $3 \times 2 \quad 3 \times 2^2 \quad 2^3$
 $3R \quad | \quad 3R^2 \quad | \quad R^3$
 $6 \cdot 12 \quad 08\%$

~~III~~ $\gamma \rightarrow 3\%$
 $t \rightarrow 3\text{ वर्ष}$

$$C.I = 9 \cdot 27 \cdot 27\%$$

(iv) $\left. \begin{array}{l} x \rightarrow 4\% \\ t \rightarrow 34\% \end{array} \right\} C.I =$

~~✓~~ $\delta \rightarrow 5\%$
 $t \rightarrow 3 \text{ वर्ष}$] C.I = $3 \times 5 \quad 3 \times 5^2 = 75 \quad 5^3 = 125$
 $3R \mid 3R^2 \mid R^3$
 $15 \cdot 76 \quad 25\%$

$$\# \begin{matrix} \delta \rightarrow 10\% \\ t \rightarrow 3 \text{ वर्ष} \end{matrix} \left. \vphantom{\begin{matrix} \delta \rightarrow 10\% \\ t \rightarrow 3 \text{ वर्ष} \end{matrix}} \right\} C.I = \frac{3R}{33 \cdot 10} \frac{3R^2}{00} \frac{R^3}{00} \\ = 33 \cdot 1\%$$

$$\# \textcircled{I} \begin{matrix} \delta \rightarrow 10\% \\ t \rightarrow 2 \text{ वर्ष} \end{matrix} \left. \vphantom{\begin{matrix} \delta \rightarrow 10\% \\ t \rightarrow 2 \text{ वर्ष} \end{matrix}} \right\} C.I = 21\% \quad C.I \rightarrow 2:1$$

$$\textcircled{II} \begin{matrix} \delta \rightarrow 10\% \\ t \rightarrow 3 \text{ वर्ष} \end{matrix} \left. \vphantom{\begin{matrix} \delta \rightarrow 10\% \\ t \rightarrow 3 \text{ वर्ष} \end{matrix}} \right\} C.I = 33 \cdot 1\% \quad C.I \rightarrow 3:3:1$$

$$\textcircled{III} \begin{matrix} \delta \rightarrow 10\% \\ t \rightarrow 4 \text{ वर्ष} \end{matrix} \left. \vphantom{\begin{matrix} \delta \rightarrow 10\% \\ t \rightarrow 4 \text{ वर्ष} \end{matrix}} \right\} 46 \cdot 41\% \quad C.I \rightarrow 4:6:4:1$$

$$R^3 = 10^3 = \check{1000}$$

$$3R^2 = 3 \times 10^2 = \check{300} + 10 \\ = \check{310}$$

$$3R = 3 \times 10 = 30 + 3 \\ = 33$$

$$\# \begin{matrix} \delta \rightarrow 10\% \\ t \rightarrow 4 \text{ वर्ष} \end{matrix} \Rightarrow \begin{matrix} \text{2 वर्ष} & + & \text{2 वर्ष} \\ 21\% & & 21\% \end{matrix}$$

$$\begin{matrix} 441 \\ 21 + 21 + \frac{21 \times 21}{100} \\ 42 + 4 \cdot 41 = 46 \cdot 41\% \end{matrix}$$

① २ वर्ष

$$C \cdot I - S \cdot I = \frac{PR^2}{100^2}$$

② ३ वर्ष

$$C \cdot I - S \cdot I = \frac{PR^2(300+R)}{100^3}$$

$\delta \rightarrow 1\%, 2\%, 3\%$

$t \rightarrow 3$ वर्ष

C.I $\rightarrow 6.1106\%$

yes/no.

1% , 2% , 3%

3.02%

3.02% 3%

$$\begin{array}{r} 6.0200 \\ 0.0906 \\ \hline 6.1106\% \end{array}$$

$\sigma \rightarrow 2\%, 3\%, 4\%$

$t \rightarrow 3$ वर्ष

$C.I \rightarrow 9.2624\%$

$2\%, 3\%, 4\%$

$\underline{\hspace{1cm}}$

5.06%

$5.06\% \quad 4\%$

$\underline{\hspace{1cm}}$

9.0600

0.2024

$\hline 9.2624\%$

$\delta \rightarrow 3\%, 4\%, 5\%$

$t \rightarrow 3$ वर्ष

$C.I \rightarrow 12.476\%$

3% 4% 5%
└───┘
7.12%

12.1200
0.3560
┌─────────
12.4760
12.476%

$$P \rightarrow 300 \text{ ₹}$$

$$t \rightarrow 3 \text{ वर्ष}$$

$$r \rightarrow 3\%, 4\%, 6\%$$

$$C.I = 13.5472\%$$

$$\frac{300^3 \times 13.5472}{100}$$

$$C.I = 40.6416$$

$$= 40.6416 \text{ ₹}$$

$$\begin{array}{ccc} 3\% & 4\% & 6\% \\ \hline & & 7.12\% \end{array}$$

$$\begin{array}{r} 13.1200 \\ 0.4272 \\ \hline 13.5472\% \end{array}$$

- ① 2 वर्ष का C.I

② 3 वर्ष का C.I