

Foundation Batch

MATHS

Compound interest

(चक्रवृद्धि ब्याज)

Part -2

LIVE

18-07-2024 07:00PM



#

દર્માંદર (Half yearly Rate)

$$H.Y.R = \frac{\text{વાર્ષિક દર}}{2}$$

||x

R = 10% વાર્ષિક

$$H.Y.R = \frac{10}{2} = 5\%$$

ત્રિમાસી દર
(Quarterly Rate)

(Q.R)

$$Q.R = \frac{\text{વાર્ષિક દર}}{4}$$

||x

R = 12% વાર્ષિક

$$Q.R = \frac{12}{4} = 3\%$$

$R = 16\%$ वार्षिक
व्याज = 8 महीने में लगाया है
8 महीने की दर

$$12M \rightarrow 16\%$$

$$1M \rightarrow \frac{16}{12}$$

$$8M = \frac{16}{12} \times 8\% = \left(\frac{32}{3}\%\right)$$

$R = 12\%$ वार्षिक

$$12 \text{ महीने} = 12\%$$

$$1 \text{ " } = \frac{12}{12}\% = 1\%$$

$$5 \text{ " } = 1\% \times 5 = 5\%$$

$$8 \text{ " } = 1\% \times 8 = 8\%$$

સમયાવધિ (Time period)

$R = 10\%$ per annum.
 $T = 1$ વર્ષ 6 મહીને

α મહીને = $\frac{\alpha}{12}$ વર્ષ

1 વર્ષ

10%

||

6 મહીને

$\frac{6}{12} \times 10$

= 5%

$R = 10\%$ वार्षिक

$T = 1$ वर्ष

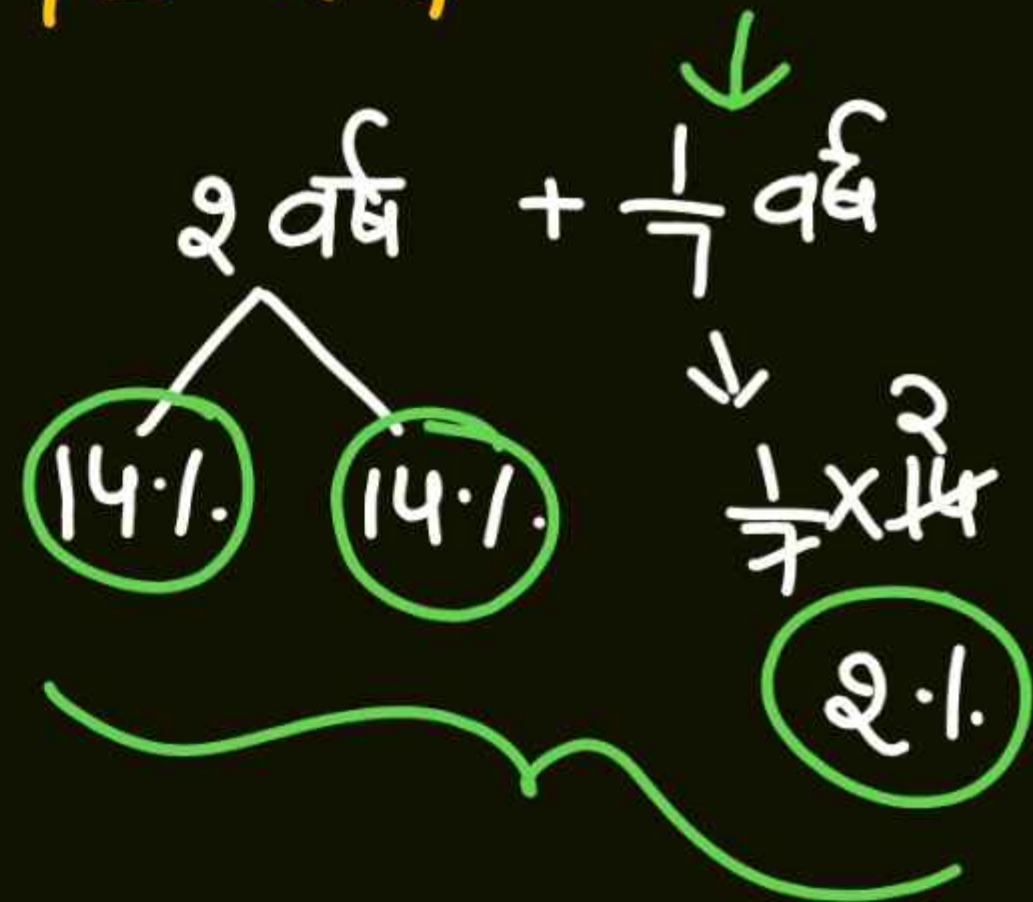
(CI) व्याज = दमाई कर से लगाता है

दमाई कर = $\frac{10}{2} = 5\%$

1 वर्ष = 2 बार

$R = 14\%$ per annum.

$T = 2\frac{1}{7}$ वर्ष

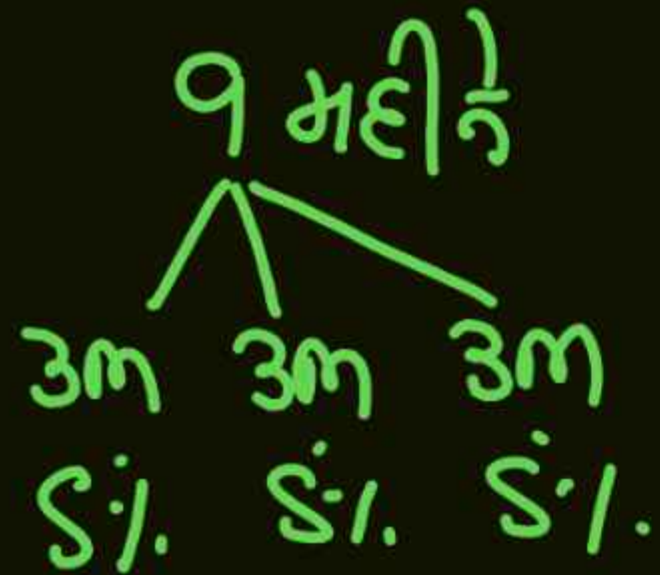


ex $R = 20\%$ વાર્ષિક

$T = 9$ મહીને

બ્યાન = તિમાદી કર
સે લગતા હૈ

તિમાદી કર = $\frac{20}{4} \%$



ex.

$R = 12\%$ વાર્ષિક

$T = 2$ વર્ષ

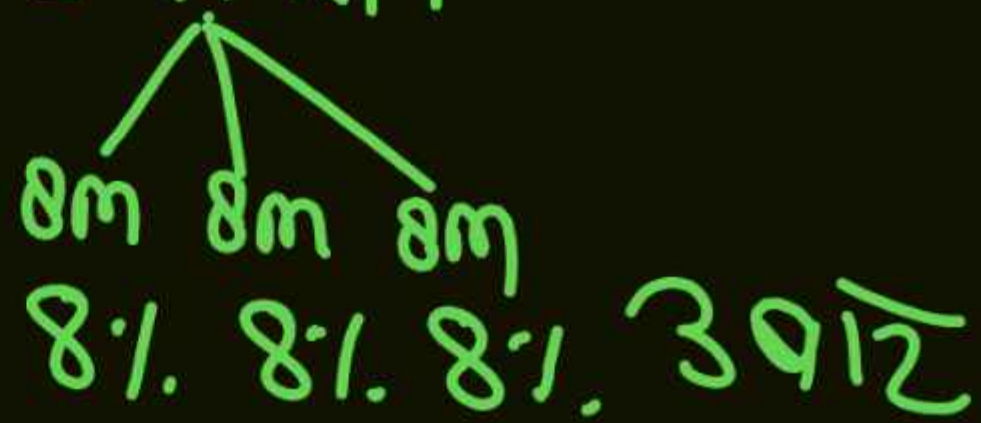
બ્યાન $\Rightarrow$ 8 મહીને કર સે લગતા હૈ

12m = 12%

1m = 1%

8m = 8%

2 વર્ષ = 24 મહીને



Ex $R = 12\%$ વાર્ષિક

$T = 15$ મહીને

બ્યાન = દરમિયાન જરૂર સે લગાતો છે

$$\frac{\text{દરમિયાન જરૂર}}{H \cdot Y \cdot R} = \frac{12}{2} = 6\%$$

15 મહીને

$\frac{6m}{6\%}$

$\frac{6m}{6\%}$

$\frac{3m}{2} = 3\%$

$$R = 10\%$$

$$\left. \begin{array}{l} 2\text{CI} = 21\% \checkmark \\ 2\text{SI} = 20\% \\ 2\text{CI} - 2\text{SI} = 1\% \end{array} \right\}$$

$$\left. \begin{array}{l} 3\text{CI} = 33\% \\ 3\text{SI} = 30\% \\ 3\text{CI} - 3\text{SI} = 3\% \end{array} \right\}$$

$$\left. \begin{array}{l} 4\text{CI} = 46.41\% \\ 4\text{SI} = 40\% \\ 4\text{CI} - 4\text{SI} = 6.41\% \end{array} \right\}$$

$$R = 5\%$$

$$\left. \begin{array}{l} 2\text{CI} = 10.25\% \\ 2\text{SI} = 10\% \\ 2\text{CI} - 2\text{SI} = 0.25\% \end{array} \right\}$$

$$\left. \begin{array}{l} 3\text{CI} = 15.7625\% \\ 3\text{SI} = 15\% \\ 3\text{CI} - 3\text{SI} = 0.7625\% \end{array} \right\}$$

$$\left. \begin{array}{l} 4\text{CI} = 21.55\% \\ 4\text{SI} = 20\% \\ 4\text{CI} - 4\text{SI} = 1.55\% \end{array} \right\}$$

$$R = 20\%$$

$$2^{\text{da}} \left\{ \begin{array}{l} 2CI = 44\% \\ 2SI = 40\% \\ 2CI - 2SI = 4\% \end{array} \right.$$

$$3^{\text{da}} \left\{ \begin{array}{l} 3CI = 72.8\% \\ 3SI = 60\% \\ 3CI - 3SI = 12.8\% \end{array} \right.$$

$$R = 15\%$$

$$2^{\text{da}} \left\{ \begin{array}{l} 2CI = 32.25\% \\ 2SI = 30\% \\ 2CI - 2SI = 2.25\% \end{array} \right.$$

$$3^{\text{da}} \left\{ \begin{array}{l} 3CI = 52.08\% \\ 3SI = 45\% \\ 3CI - 3SI = 7.08\% \end{array} \right.$$

$$R = 3\%$$

$$\begin{cases} 2CI = 6.09\% \\ 2SI = 6\% \\ 2CI - 2SI = 0.09\% \end{cases}$$

$$\begin{cases} 3CI = 9.2727\% \\ 3SI = 9\% \\ 3CI - 3SI = 0.2727\% \end{cases}$$

$$R = 2\%$$

$$\begin{cases} 2CI = 4.04\% \\ 2SI = 4\% \\ 2CI - 2SI = 0.04\% \end{cases}$$

$$\begin{cases} 3CI = 6.1208\% \\ 3SI = 6\% \\ 3CI - 3SI = 0.1208\% \end{cases}$$

$$\star \boxed{R=8\%}$$

$$\begin{cases} 2CI = 16.64\% \\ 2SI = 16\% \\ 2CI - 2SI = 0.64\% \end{cases}$$

$$\begin{cases} 3CI = 25.97\% \\ 3SI = 24\% \\ 3CI - 3SI = 1.97\% \end{cases}$$

$$\boxed{R=4\%}$$

$$\begin{cases} 2CI = 8.16\% \\ 2SI = 8\% \\ 2CI - 2SI = 0.16\% \end{cases}$$

$$\begin{cases} 3CI = 12.4864\% \\ 3SI = 12\% \\ 3CI - 3SI = 0.4864\% \end{cases}$$

$$\boxed{R=12\%}$$

$$\begin{cases} 2CI = 25.44\% \\ 2SI = 24\% \\ 2CI - 2SI = 1.44\% \end{cases}$$

$$\begin{cases} 3CI = 40.49\% \\ 3SI = 36\% \\ 3CI - 3SI = 4.49\% \end{cases}$$



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MATHS



TYPE – I



$$R = 10\%$$

$$T = 2Y$$

$$RCI = 21\%$$

$$\frac{21}{100} \times 6000$$

$$= 1260$$

1. Find the compound interest on a principal sum of ₹6,000 at 10% annual interest for 2 years.

₹6,000 के मूलधन पर 10% वार्षिक ब्याज की दर से 2 वर्ष का चक्रवृद्धि ब्याज ज्ञात कीजिए।

(a) ₹1,240

(b) ₹1,250

(c) ~~₹1,260~~

(d) ₹1,230



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H.W. 2. Find the compound interest on a principal sum of ₹25000 at 12% annual interest for 3 years.

₹25000 की राशि पर 12% वार्षिक चक्रवृद्धि ब्याज की दर से 3 वर्ष का चक्रवृद्धि ब्याज ज्ञात कीजिए।

- (a) ₹ 900.30
- (b) ₹1048.20
- (c) ₹10123.20
- (d) ₹9720