

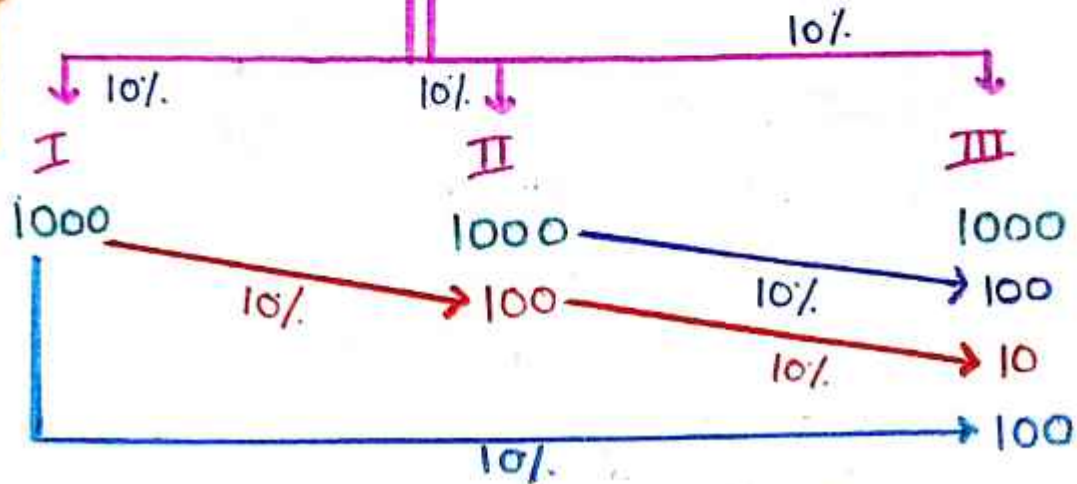
COMPOUND INTEREST

TREE METHOD (CI)

$P = 10000$

$T = 2$ वर्ष, $R = 10\%$ वार्षिक

Ist year
SI = CI

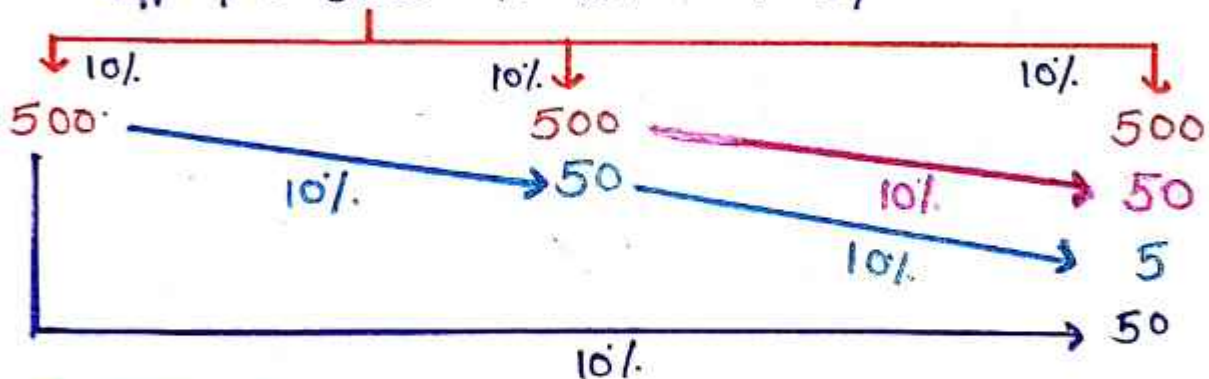


• $3 \text{ SI} = 3000$
 $3 \text{ CI} = 3310$

• $2^{\text{nd}} \text{ CI} = 1100$

$3 \text{ CI} - 3 \text{ SI} = 3310 - 3000$
 310

$P = 5000$ $R = 10\%$ $T = 3y$



• $3 \text{ SI} = 1500$
 $3 \text{ CI} = 1655$

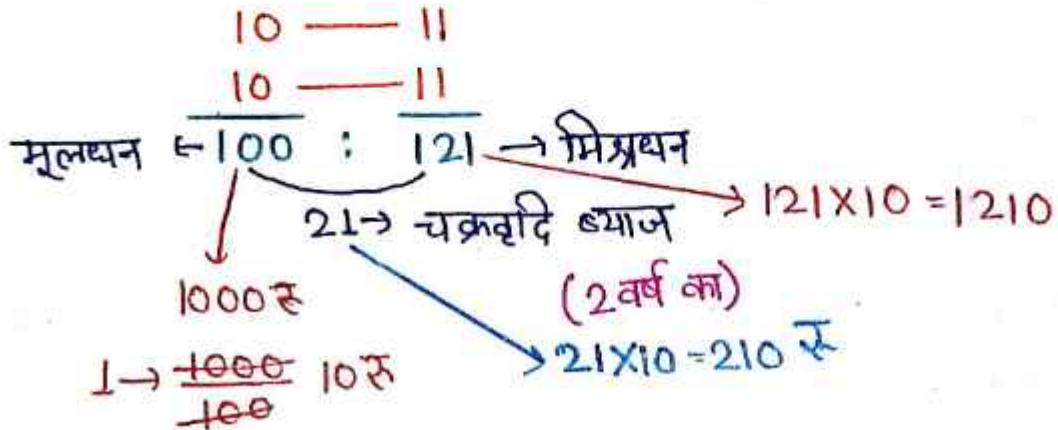
• $3^{\text{rd}} \text{ CI} = 605$

• $2^{\text{nd}} \text{ CI} = 550$

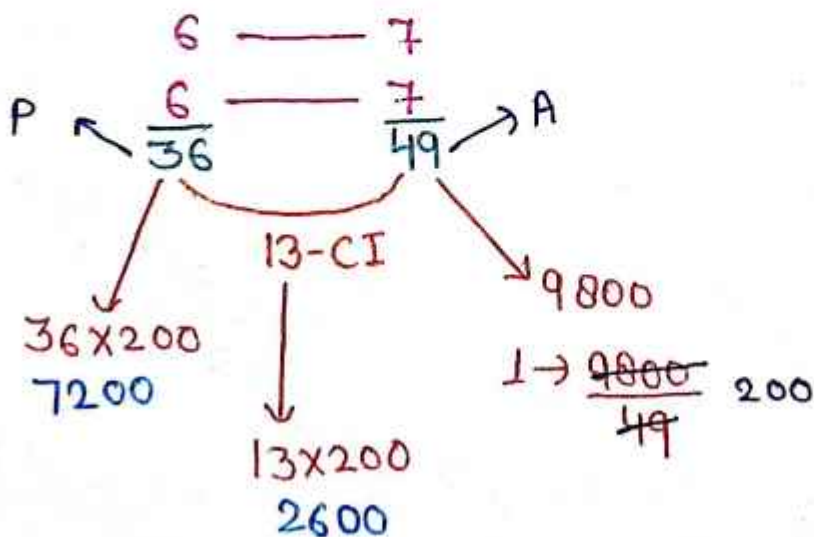
$3 \text{ CI} - 3 \text{ SI} = 1655 - 1500$
 155

Ratio Method

- $P = 1000$
 $R = 10\% \rightarrow 10\% = \frac{1}{10}$
 $T = 2 \text{ years}$



- $P = ?$
 $R = 16\frac{2}{3}\%$
 $T = 2 \text{ वर्ष}$
 $A = 9800 \text{ रु}$
 2 वर्ष का CI = ?
 $16\frac{2}{3}\% = \frac{1}{6}$



2 वर्ष के CI का Formula.

a% b%

$$2CI = \left(a + b + \frac{a \times b}{100} \right) \%$$

Ex:- R = 10% T = 2y a = 10% b = 10%

$$2CI = 10 + 10 + \frac{10 \times 10}{100}$$

$$20 + 1 = 21\%$$

* 2SI = 10% × 2

$$20\%$$

* 2CI - 2SI = 21% - 20%

$$1\%$$

Ex:- R = 5%

 T = 2y

 2CI = %

$$2CI = 5 + 5 + \frac{5 \times 5}{100}$$

$$10 + \frac{25}{100}$$

$$10 + 0.25$$

$$10.25\%$$

Ex:- R = 32%

 T = 2y

 2CI = %

$$32 + 32 + \frac{32 \times 32}{100}$$

$$64 + \frac{1024}{100}$$

$$64 + 10.24$$

$$74.24\%$$

ROJGAR WITH ANKIT

Ex:- $R = 45\%$
 $2 \text{ CI} = \%$

$$45 + 45 + \frac{45 \times 45}{100}$$

$$90 + \frac{2025}{100}$$

$$90 + 20.25$$

$$110.25\%$$

3 वर्ष के CI का Formula

a% b% c%

$$\left[(a+b+c) + \frac{ab+bc+ca}{100} + \frac{abc}{10000} \right] \%$$

Ex:- $R = 10\%$, $T = 3y$, $3 \text{ CI} = \%$

$$10\% \quad 10\%$$

$$10 + 10 + \frac{10 \times 10}{100}$$

21%

10%

$$21 + 10 + \frac{21 \times 10}{100}$$

$$31 - 2.1$$

33.1%

Ratio Method

$$10\% = \frac{1}{10}$$

$$\begin{array}{r} 10 \quad \text{---} \quad 11 \\ 10 \quad \text{---} \quad 11 \\ 10 \quad \text{---} \quad 11 \\ \hline 1000 \quad \quad \quad 1331 \end{array}$$

CI = 331

$$\frac{331}{1000} \times 100$$

33.1%

Formula

$$30 + \frac{100 + 100 + 100}{100} + \frac{1000}{10000}$$

$$30 + \frac{300}{100} + 0.1$$

$$33 + 0.1$$

$$33.1\%$$

$$\left. \begin{array}{l} R_1 = 3\% \\ R_2 = 4\% \\ R_3 = 5\% \end{array} \right\} 3CI = \%$$

$$12 + \frac{12 + 20 + 15}{100} + \frac{60}{10000}$$

$$12 + \frac{47}{100} + 0.006$$

$$12 + 0.47 + 0.006$$

$$12 + 0.476$$

$$12.476\%$$

12% वार्षिक

$$12 \text{ महीने} = 12\%$$

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

तिमाही
दमाई
8 महीने की
दर

$$3 \text{ " } \rightarrow 1\% \times 3 = 3\%$$

$$6 \text{ " } \rightarrow 1\% \times 6 = 6\%$$

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

(HYR) Half Yearly Rate
दमाई / अर्धवार्षिक दर

$$\left\{ \text{HYR} = \frac{\text{वार्षिक दर}}{2} \% \right\}$$

तिमाही दर
 Quarterly Rate (QR)

$$\left\{ QR = \frac{\text{वार्षिक दर}}{4} \% \right\}$$

- R = 6% वार्षिक
अर्धवार्षिक व्याज

$$T = \frac{1 \text{ वर्ष}}{2} \quad \frac{6 \text{ महीने}}{2}$$

$$HYR = \frac{6}{2} = 3\%$$

↓ ↓
 2 बार + 1 बार
 3 बार

- R = 8% वार्षिक
तिमाही दर

$$T = 9 \text{ महीने}$$

$$QR = \frac{8\%}{4} = 2\%$$

$$9 \text{ महीने} \rightarrow \underbrace{3M \quad 3M \quad 3M}_{3 \text{ बार}}$$

- R = 16% वार्षिक
द्वमास दर

$$T = 15 \text{ महीने}$$

$$HYR = \frac{16}{2} = 8\%$$

$$\begin{matrix} 6M \\ \downarrow \\ 8\% \end{matrix}$$

$$\begin{matrix} 6M \\ \downarrow \\ 8\% \end{matrix}$$

$$\begin{matrix} 3M \\ \downarrow \\ 4\% \end{matrix}$$

$$\frac{3}{12} \times \frac{1}{4} \times 16 = 4\%$$