



# Simple Interest

P = principle (धूम्रात)

T = Time (मिनीट) year/ days/ hours

R = Rate (रेट)

I = interest

Amount (कलाई)

$$R = \frac{\text{Interest} \times 100}{\text{principle}}$$

$$A = P + SI$$

T यर वा रुपये

$$TR = \frac{I \times 100}{P}$$

$$I = \frac{PTR}{100}$$

$$SI = P \times T \times R$$

$SI =$  simple Interest.

Q:- P=2000, R=5%, T=4 years

$$SI = \frac{2000 \times 5}{100} = 100 \text{ A}$$

$$A = 2000 + 100 = 2100 \text{ A}$$

Q2

$$P = 2000 = 100\%$$

$$R = 5\% \rightarrow I = 100 \times 5 = 50 \text{ A}$$

$$T = 4 \text{ years} \rightarrow I = 50 \times 4 = 200 \text{ A}$$

$$A = P + I = 2000 + 200 = 2200 \text{ A}$$

$$SI = 2000 \times 5\% = 100 \text{ A}$$

P 148 Q) Interest (Ex)

#

$$R = 16 \frac{2}{3} \% = \frac{1}{6}$$

P principle

3 yrs after Amount 27k at 5% p.a.

$$P = ?$$

$$P = 6$$

$$I = 1 \times 3 = 3$$

$$A = P + I =$$

$$A = P + I = 9 = 27k$$

$$1 \rightarrow \frac{27}{9} = 3k$$

$$P = 6 \times 3k = 18k$$

#

$$\text{Rate} = 22.22\% = \underline{\underline{9.9}}$$

$$\text{Time} = 4 \text{ yrs}$$

Interest (148)

$$P: A ?$$

$$\text{if } 1 \text{ yrs } I = 2$$

$$\text{so } 4 \text{ yrs } I = 8$$

$$\therefore P = 9$$

$$A = P + I = 8 + 9 = 17$$

$$P: A = 9: 17$$

#

$$\text{Rate} = 83 \frac{1}{3}\% = \frac{5}{3} \text{ %}$$

$$\text{Time} = 6 \text{ months}$$

$$P = 6$$

$$A = \frac{5}{2} + 6 = \frac{17}{2}$$

249  
250  
2x100

$$1 \rightarrow 5$$

$$\frac{5}{2} (\text{6 mon}) = 5 \times \frac{1}{2}$$

$$T = 9 \text{ S.I.}$$

$$= 6 : \frac{17}{2}$$

$$= 12 : 17$$

# Rate =  $57\frac{1}{7} \cdot 1 =$

$T = 4 \text{ yrs } 4 \text{ mont}$

$$= 4 \frac{4}{12} = 4 \frac{1}{3}$$

$$= \frac{13}{3} \text{ yrs}$$

$$\text{Rate} = 57\frac{1}{7} = \frac{y - \text{Interest}}{\text{Principle}}$$

now  $2 \text{ yrs} = 9$

$$21 \quad \frac{13}{3} \text{ yrs} = 4 \times \frac{13}{3} = \frac{52}{3}$$

$\frac{52}{3}$

$$P: A$$

$$21 : 2 + \frac{52}{3} =$$

$$21 : \frac{73}{3}$$

$$21 : 73$$

if Amount = 29200

$$P = ?$$

$$I = ?$$

$$I = A - P$$

$$= 29200 - 8400$$

$$= 20800$$

$$73 \rightarrow 29200$$

$$1 \rightarrow P 400$$

$$21 - P 400 \times 21 = 8400$$

(1)

Time = 348 73 day

$$= 3 \frac{73}{365} \text{ yr}$$

$$= 3 \frac{1}{5} = \frac{16}{5} \text{ yr } 1$$

(X)

Time का रूपानि :-

month to year

$$2 \text{ month} = \frac{2}{12} = \frac{1}{6} \text{ yr}$$

$$73 \text{ day} = \frac{73}{365} = \frac{1}{5} \text{ yr}$$

$$3 \text{ month} = \frac{3}{12} = \frac{1}{4} \text{ yr}$$

$$146 \text{ day} = \frac{146}{365} = \frac{2}{5} \text{ yr}$$

$$4 \text{ month} = \frac{4}{12} = \frac{1}{3} \text{ yr}$$

$$365 \text{ day} = \frac{365}{365} = 1 \text{ yr}$$

(X)

Date का मात्रा से Time का रूपानि

EP

17 Aug 2021 से 15 Sep 2021 तक

31 - 17

14

$$14 + 15 = 29 \text{ दिन}$$

EP

10 25 Feb 2020 तो 18 Aug 2020 तक

29 - 25

19 पर्याय (29)

18

Feb = 4

Mar = 31

Apr = 30

May = 31

June = 30

July = 31

Aug = 18

total = 175 दिन

#

$$\frac{PRT}{100} = SI$$

SI  $\propto$  PSI  $\propto$  RSI  $\propto$  T

Q: यदि प्रधान राशि 1200 रुपये का है तो उसकी साधारण व्याधि 12% है। इसका वर्षा व्याधि का मान है?

उत्तर: 1200  $\times \frac{12}{100} = 144$

$$I = \frac{PRT}{100} = \frac{\frac{3}{5} P}{6} \times \frac{12}{100} T$$

$$\frac{3I}{250} = R$$

Q: यदि बंदर द्वारा दिए गए व्याधि का मान 540 रुपये है तो उसका वर्षा व्याधि का मान क्या है?

उत्तर:  $540 \times \frac{100}{12} = 450$  (2 गुना)  $\Rightarrow 450 \times 10 = 4500$  रुपये

$$SI = \frac{PRT}{100}$$

$$SI = \frac{540}{600} \times 100 \times 2 = 1800$$

$$SI = 1800 \text{ रुपये}$$

Q:- 348 में ST = 1200 रुप. उत्तर ~~348~~ 348 916  
 principle 2 times & rate half of simple  
~~6% per~~ ~~ST~~ ~~for 1 year~~

$$ST = \frac{1200}{348} \times 348 = \frac{1200 \times 2(P)}{2} \times \frac{1}{(R)}$$

~~2P~~ ~~ST~~ ~~916~~ ~~87~~

S.I.A      S.I.B

$$\frac{P_A R A T A}{100} = \frac{P_B R B T B}{100}$$

$P_A = R B T B$   
 $P_B = R A T A$

Ques:- (A)  $R = 10\%$ ,  $T = 24\text{ months}$

(B)  $R = 20\%$ ,  $T = 348$

$$\frac{P_A}{P_B} = ? \quad \text{उत्तर} \quad S.I.A = S.I.B \quad (\text{संमान})$$

$$\frac{P_A}{P_B} = \frac{R B T B}{R A T A} = \frac{20 \times 3}{10 \times 2} = \frac{3}{1}$$

O:

A

B

C

$$R_1 = 10\%.$$

$$R_2 = 5\%.$$

$$R_3 = 6\%.$$

$$T_A = 2 \text{ yrs}$$

$$T_2 = 3 \text{ yrs}$$

$$T_3 = 2 \text{ yrs}$$

If first scheme & S.I. equal  $\Rightarrow$

$$P_A : P_B : P_C$$

$$P_A(R_1 T_1) = P_B(R_2 T_2) = P_C(R_3 T_3)$$

170

$$P_A(20) = P_B(15) = P_C(12)$$

$$18\% : 24\% : 30\%$$

$$\begin{matrix} 18 \\ 3 \end{matrix} : \begin{matrix} 24 \\ 4 \end{matrix} : \begin{matrix} 30 \\ 5 \end{matrix} \rightarrow$$

O:

A

B

$$R_A = 16 \frac{2}{3}\%.$$

$$R_B = 12 \frac{1}{2}\%.$$

$$T_A = 3 \text{ yrs}$$

$$T_B = 4 \text{ yrs}$$

$$P_A : P_B ?$$

if equal  $\Rightarrow$

$$P_A \left( \frac{1}{6} \right)^3 = P_B \left( \frac{1}{4} \right)^4$$

$$\frac{P_A}{P_B} = \frac{1}{1} \Delta$$

2/16 Amount after 6% :-

$$A = P + SI$$

Interest of 1. (g) Interest of Ratio (h)

$$P = 100\%$$

$$S.I. = 20\%$$

$$P = 1$$

$$SI = \frac{1}{5}$$

$$\text{Amount} = 120\%$$

$$\text{Amount} = \frac{6}{5}$$

both are same

$$P_A \text{ let } P = 100\% \quad P_B$$

$$\text{let } P = 100\% \\ 60$$

$$R_A = 10\% \quad X = 20\% \quad R_B = 30\% \quad X = \frac{3}{2} \\ T_A = 248 \quad \frac{120}{100} \quad T_B = 348 \quad \frac{180}{30} \quad \text{total} = 160\%$$

$$\text{if } A_A = P_B \text{ (equal)} \quad \text{if}$$

$$\frac{P_A(120)}{3} = \frac{P_B(160)}{4}$$

$$\frac{P_A}{P_B} = \frac{4}{3} \quad A$$

$$P_A \quad 1 + \frac{5}{8} = \frac{11}{6}$$

$$P_B$$

$$1 + \frac{2}{5} = \frac{7}{5}$$

$$P_A = 16 \quad \frac{2}{3} - 1 = \frac{1}{3} \quad X = \frac{5}{6}$$

$$R = 20\% \quad \frac{1}{5} = \frac{2}{5} \\ T = 248 \quad X_2 = \frac{2}{5}$$

$$T_A = 540$$

~~$$\frac{P_A}{P_B} = P_A \cdot \frac{F}{6} = P_B \left(\frac{2}{5}\right)$$~~

$$\frac{P_A}{P_B} = \frac{42}{55} \quad A$$

~~Concept~~

~~if S.I. & R.T. S.I. & Rate & Time & S.I.~~  
~~numerical value equal to 1.~~

$$S.I. = \frac{P \times R \times T}{100}$$

if  $R = T$ 

$$\frac{S.I. \times 100}{P} = R \text{ or } T$$

~~if S.I. & P & time & rate & time & S.I.~~  
~~Rate & time & numerical value~~  
~~equal to the Rate find.~~

$$\frac{S.I. \times 100}{P} = \frac{S.I.}{9-P}$$

$$R = \sqrt{\frac{S.I. \times 100}{P}} = \sqrt{\frac{86 \times 100}{9}}$$

$$= \frac{4 \times 10}{3} - \frac{40}{3} = 13\frac{1}{3} - R$$

~~Ex~~

Time &amp; Amount Relation:-

$$(Amount) \quad 1400 \quad R = \frac{200 \times 10}{1400}$$

$$2 \text{ yrs } \Rightarrow P + 2(S.I.) = \frac{200 \times 10}{1400}$$

$$R = \frac{1000}{1400}$$

$$5 \text{ yrs } \Rightarrow P + 5(S.I.)$$

$$340 \text{ S.I.} \rightarrow P = 100 R.P$$

$$S.I. = 140 \text{ S.I.} \rightarrow 200 R.P$$

$$\text{Q: } 740 - 5400 \text{ Rs} \quad \text{find } P?$$

$$10 \text{ yrs} - 6000 \text{ Rs} \quad R = ?$$

$$3 \text{ yrs} - 600$$

$$1 \text{ yr} \rightarrow 200 \text{ Rs} (\text{SI})$$

$$A = P + \frac{P}{100} \times 3 \text{ (SI)} : P + 7 \times 200$$

$$5400 = P - 1400$$

$$P = 4000 \text{ Rs}$$

$$R = \frac{\text{SI} \times 100}{\cancel{4000} P} = \frac{200}{\cancel{4000} 200} \times 100 = 5\%$$

"~~Time~~ ~~Rate~~ ~~Amount~~ ~~Interest~~" :-

$P$   $\downarrow$   $n$   $\nearrow$   $\text{Amount}$   
 principle  $\nearrow$   $\text{Rate} = R$   
 $\nearrow$   $\text{Time} = T$

$$\text{S.I.} = nP - P = P(n-1) = \frac{PRT}{100}$$

$n = \frac{\text{S.I.}}{P} = \frac{RT}{100}$   $\text{Time}$   
 $n-1 = \frac{RT}{100}$   $\text{Rate}$

$$\text{Q: } 2000 \text{ } 47 \text{ } 5 \text{ } 3000 \text{ } 87 \text{ } 57 \text{ } 67 \text{ } R = 10\% \text{ } T = ?$$

$$n-1 = \frac{RT}{100}$$

$$T = 40 \text{ yrs}$$

$$n-1 = 10 \times T$$

Q-2

973 01 → 23 VII → 17/18 yrs → R2

$$n-1 = \frac{RT}{100}$$

~~$$6 = 18 \times T$$~~

$$2-1 = \frac{R \times 18}{100}$$

$$\frac{600}{18} = R$$

$$R = 33 \frac{1}{3} \text{ A}$$

Q-3

$R = 51$  → ~~973 01 → 23 VII → 17/18 yrs~~

$$T = 20 \text{ yrs}$$

$$n-1 = \frac{RT}{100}$$

$$= \frac{5 \times 20}{100} 1$$

$$n = 2 \text{ A}$$

Comparison (Q & Q) :-

Q & Q

| 973 01         | Time           | n              |
|----------------|----------------|----------------|
| (R & e = same) | T <sub>1</sub> | n <sub>1</sub> |
|                | T <sub>2</sub> | n <sub>2</sub> |

Ques:- 9

$$\text{eff eff} \quad \text{Rate} \quad n \\ (\text{Time} = \text{sum}) \quad R_1 \quad n_1 \\ \quad R_2 \quad n_2$$

Ques:- 3

$$RT \quad n \\ R_1 T_1 \quad n_1 \\ R_2 T_2 \quad n_2$$

O:- 540 — 3 time  
 Rates? — 5 times  
 Same is

$$\frac{5}{x} = \frac{n-1}{n-1}$$

$$\frac{5}{x} = \frac{3-1}{5-1}$$

$$\frac{5}{x} = \frac{x}{4x}$$

$$x = 1040$$

O-2 6.1. Rate — 19 time  
 x rate — 25 time  
 same

$$\frac{6}{x} = \frac{19-1}{25-1} = \frac{5}{12}$$

$$x = 84$$

O-3 51. — 17 time  
 161. — ? time

$$\frac{5}{16} = \frac{17-1}{n-1}$$

$$\frac{5}{16} = \frac{16}{n-1}$$

$$n-1 = \frac{16 \times 16}{5} = \frac{256}{5}$$

$$n-1 = 51.2$$

$$n = 52.2$$

(9) 740 — 22 time  
 1940 — ? time

$$\frac{7}{19} = \frac{22-1}{n-1}$$

$$\frac{7}{19} = \frac{21}{n-1}$$

$$n-1 = 52 \\ n = 58 \text{ (true)}$$



S.I. & C.I. short cut by  $\frac{P}{100}$  for Interest  
per year same result :-

(Q. 1)

$$\rightarrow P_1 = 2000$$

$$P_2 = 4000$$

$$\rightarrow R_1 =$$

$$R_2 =$$

$$\rightarrow T_1 = 340$$

$$T_2 = 740$$

difference bet<sup>n</sup> Interest = 180

diff b/w Rate = ?

$$\rightarrow \frac{2000 \times 3 \times R_1}{100}$$

$$\frac{4000 \times 1 \times R_2}{100}$$

$$60R_1 - 40R_2 = 180$$

Ans → CND / cannot be determined

~~$R_1 - R_2 = \frac{180}{200} = 0.9$~~

(Q. 2)

$$P = 18000$$

$$P = 15000$$

I si diff = 540

$$e_1 =$$

$$R_2 =$$

$$R_1 - R_2 ?$$

$$T_1 = 540$$

$$T_2 = 640$$

$$\frac{18000 \times 5 \times R_1}{100}$$

$$\frac{15000 \times 6 \times R_2}{100}$$

$$900R_1 - 900R_2 = 540$$

$$900(e_1 - e_2) = 540$$

$$R - R_2 = 0.6 \text{ l. p.}$$

$$A = \text{Amount} + \text{no. of installments} \times \frac{\text{each installment}}{100} (1+R)$$

Amount  
no. of installments  
Each installment

L-5

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Ajanta

## Installment (B&C)

(i) pre Installment

|     |     |     |
|-----|-----|-----|
| 147 | 241 | 348 |
| x   | x   |     |
| 100 | 100 |     |

(ii) post Installment

(D.P) - down payment

|     |      |
|-----|------|
| 794 | 2117 |
|-----|------|



Q:- cycle price = 16,000 RS

down payment (D.P) = 6000 RS

Installment (月供) = 2000/month (6 month mo)

R = ?

Total payment =  $2000 \times 6 = 12,000$

D.P = 6000

Total = 18,000

Interest = Total - Cycle price

Interest = 2000 = 10,000

- 8000

+ 6000

+ 4000

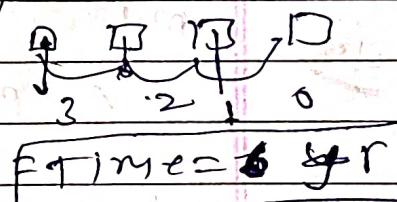
+ 2000

30,000

$$\frac{Interest}{2000} = \frac{30,000 \times R \times 1}{100 \times 12}$$

Note:-  
+ interest

$$R = 80.1\%$$



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GREEN HOUSE PRODUCTS



## SMART WRITERS

Happiness lies in the joy of achievement and the thrill of creative effort.



Spiral Exercise Book

# Compound Interest

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$P$  = Principle

$R$  = Rate

$T$  = Time

$A$  = Amount

$C.I. = \text{Compound Interest}$

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

Let  $t=1$

$$A = P + \frac{PR}{100}$$

year 21/10  $\frac{S.I.}{C.I.}$

$S.I.$   $\frac{S.I.}{C.I.}$  21/11

$S.I. = C.I.$

$T=2$ :

$$A = P \left(\frac{100+R}{100}\right)^2$$

$$\frac{A}{P} = \left(\frac{100+R}{100}\right) \left(\frac{100+R}{100}\right)$$

vertical

form

or

$T=2$

$$\begin{array}{c} 100 & (100+R) \\ 100 & (100+R) \\ \hline P & A \end{array} \quad \left\{ \begin{array}{l} \text{horizontal} \\ \text{form} \end{array} \right.$$

①

$R = 20\%$   $T = 2yrs$

find  $P:A$

~~$R = 20\% = \frac{1}{5}$~~

old

$m-1$

$$A = P \left(\frac{100+20}{100}\right)^2$$

$\frac{5}{6} - T_1$

$\frac{5}{6} - T_6$

$$\frac{A}{P} = \frac{6}{5} = \frac{36}{25} A$$

$\frac{25}{36} : 26$

$P : A = 1 : 1$

$C.I. = P - A = 36 - 25 = 11$  Ratio

if  $P = 5,000$  then  $A ? CI ?$

$$25 \rightarrow 5,000 \quad (P.V.)$$

$$1 \rightarrow \frac{200}{25} \quad 200$$

$$A = 3.5 \times 200 = 700$$

$$CI = 11 \times 200 = 2200$$

(Successive interest on C.I. of 20% Y/T)

① Rate =  $16\frac{2}{3}\%$  -  $\frac{1}{6}$        $A = 1960$        $T = 24 \times 10$  C.I.  
 $P = ?$        $C.I. = ?$

$$\begin{array}{c} 6 \\ 6 \end{array} \quad \begin{array}{c} 7 \\ 7 \end{array} \quad \begin{array}{c} T_1 \\ T_2 \end{array} \quad (240)$$

$$\begin{array}{c} 36 : 49 \\ P \quad A \end{array} \quad 49 \rightarrow \frac{1960}{49}$$

$$1 \rightarrow 40$$

$$C.I. = 13$$

$$P = 40 \times 36 = 1440$$

$$C.I. = 13 \times 40 = 520$$

② Rate =  $10\frac{1}{10}$  -  $1\frac{2}{5}$  yrs @ CI       $P: A$   $\text{F.A.}$   
 $(\text{per year})$

$$\frac{1}{10}$$

only then

$$10 : 11 \quad (1 \text{ yr})$$

$$\frac{2}{8} \times 10 = \frac{4}{25} = 4\% = \frac{1}{25}$$

$$25 : 26 \quad (\frac{2}{5} \text{ yr})$$

$$\frac{2}{5} \text{ yrs direct}$$

$$250 : 286$$

Rate of multi

$$125 : 143$$

ply or kxr  
dence

$$[P : A] \text{ Ans}$$

(2)

$$\text{Rate} = 20\% \quad \text{Time} = \frac{148}{365} \text{ years} \quad [P:A]?$$

 $\frac{1}{5}$ 

5      6 (148)

 $48 = \frac{23}{365} 48$ 

$$4r = \frac{1}{5} \times 20\% = 4\%$$

$$\begin{array}{r} 25 \\ 26 \\ \hline 125 \end{array}$$
 $= \frac{1}{25}$ O:-y

$$\text{Rate} = 10\% \quad T = 348 \text{ @ CI} \quad P:A$$

 $\frac{1}{10}$ 

10      11

10      11

10      11

 $\underline{1000 : 1331}$ P: A ~~A~~

C.I.: 331 + Ratio

O:-5

$$R = 16 \frac{2}{3}\% \quad T = 2 \frac{3}{4} \text{ years}$$

 $= \frac{1}{6}$ 

$$\frac{8 \times 1}{9 \times 6^2} = \frac{1}{8} \text{ ad.}$$

6      7      148

6      7      248

9      9       $\frac{3}{7} 48$  $\underline{32 : 49}$ P: A ~~A~~

$$\cancel{R = 20\%}, T = 3 \text{ yrs} @ CI \quad P = 5000 \text{ Rs}$$

5

3rd yrs SI C.I.?

5 6

5 6

$$\begin{array}{r} 5 \\ 1 \\ \hline 125 \end{array} \quad \begin{array}{r} 1 \\ \hline 36 \end{array} \quad \begin{array}{l} 3 \text{rd yrs SI } (T = 36 \times 40) \\ = 1440 \end{array}$$

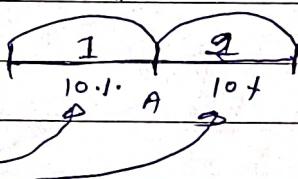
$$125 \rightarrow 5000$$

$$1 \rightarrow \frac{5000}{125}$$

$$\cancel{R = 20\%} \quad T = 1 \text{ yr}$$

Interest 6 month  $\overbrace{\text{SI}}$   $\overbrace{\text{CI}}$  P-A

$$\begin{array}{l} 20\% \rightarrow 20\% \\ 12 \text{ month} \rightarrow 20\% \\ 6 \text{ month} = \frac{20 \times 6}{12} \\ = 10\% \end{array}$$



$$\cancel{R = 15\%} \quad T = 12 \text{ months} @ CI \quad \text{S. monthly}$$

$$12 \text{ months} \rightarrow 15 \quad \begin{array}{c} | \quad 5 \quad | \quad 5 \quad | \quad 5/2 | \\ R = 5\%. \quad 5\%. \quad 5\%. \end{array}$$

$$1 \rightarrow \frac{15}{12}$$

$$5 \rightarrow \frac{15 \times 5}{12} \quad \frac{12}{5} = 5 + 5 + \frac{5}{2}$$

$$5\% = \frac{25}{12} \text{ %}$$

$$\cancel{R = 20\%} \quad T = 14 \text{ months} @ CI \quad 6 \text{ monthly}$$

$$12 \text{ months} \rightarrow 20 \quad \begin{array}{c} | \quad 6 \quad | \quad 6 \quad | \quad 2/6 | \\ T_1 \quad T_2 \quad T_3 \end{array}$$

$$1 \text{ month} \rightarrow \frac{20}{12}$$

$$6 \text{ mo} = \frac{20 \times 6}{12} \quad \left| \quad R_{\text{6 monthly}} = 10\% \right.$$

$$= 10\%$$

$$T_{\text{6 monthly}} = 2 \frac{1}{3} \text{ yrs}$$

~~(1)~~

$$R = 18\% \quad T = 18 \text{ month} \quad 3 \text{ monthly } \frac{3}{4} \text{ year}$$

$$12 \rightarrow 18$$

$$1 \rightarrow \frac{18}{12}$$

$$5 \rightarrow \frac{18 \times 5}{12}$$

$$= \frac{90}{12} \cdot 1$$

$$\begin{array}{r} 18(3 \\ 15 \\ \hline x 3 \end{array}$$

$$\begin{array}{ccccccc} & | & 5 & | & 5 & | & 5 & | & 3/5/ \\ & | & 1 & | & 1 & | & 1 & | & 3 \\ & | & \cancel{1} & | & \cancel{1} & | & \cancel{1} & | & \\ & & & & & & & 3 & \\ & & & & & & & \cancel{3} & \\ & & & & & & & & 5 \end{array}$$

$$40 \quad 41 \quad 48$$

$$40 \quad 41 \quad 248$$

$$40 \quad 41 \quad 348$$

$$T_{5 \text{ month}} = \frac{3}{5} = 40$$

$$\begin{array}{r} 18 \\ 96 \times 3 \\ \hline 12 \\ \cancel{12} \end{array}$$

~~(2)~~

यदि  $31241 \dots 31$  एवं वे तीन सुक्रेश्वरी

$248$  वाले  $248$  वाले तीन विभिन्न प्रथम अंक  $(CJ - SJ)$

$31$  दिल्ली विभिन्न  $248$  वाले विभिन्न  $31241$  वाले अंक

$31241$  वाले अंक  $31$  वाले अंक  $248$  वाले अंक  $31241$  वाले अंक

$$(x + y \pm \frac{xy}{100})$$

$$\theta' - x = 248 \quad T = 248 \quad C.I. = 2 + 2 + \frac{2 \times 2}{100} = 4.04\%$$

$$SJ = 41 \rightarrow CJ - SJ = 0.04\%$$

$$\theta = 41 \quad T = 248 \quad C.I. = 4 + 4 + \frac{0.04 \times 248}{100}$$

$$\frac{992}{25}$$

$$= 8 + \frac{4}{25} = \frac{204}{25} = 8.16\%$$

$$\text{Q: } P = 2000 \quad R = 10\% \quad T = 24\text{ months} \quad CI - SI = 200$$

$$SI = 201 \cdot \quad CI = 10 + 10 + \frac{10 \times 1}{100} = 211 \cdot \quad CI - SI = 11$$

$$100\% = \frac{2000}{100}$$

$$11\% = \frac{200}{100}$$

L-3  
X  
" Tree method:-"

$$\textcircled{1} \quad R = 12 \frac{1}{2}\% \quad T = 34\text{ months} \quad @ CI \quad CI = ?$$

$$2^{29} CI = 0$$

$$R = \frac{1}{8}(P)$$

$$(8)(P)^T$$

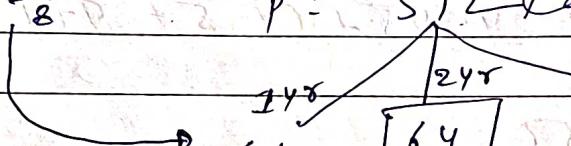
$$3^{29} \text{ yrs } CI = 1$$

$$CI - SI = ?$$

$$P = (8)^3$$

$$\frac{512}{8} = 64$$

$$\frac{512}{8} = 64$$



$$\frac{1}{8} = 64$$

$$\textcircled{2} \quad CI \text{ of } 2\% = 72$$

$$CI \text{ of } 3^{29} \text{ yrs} = 81$$

$$\textcircled{1} \quad CI = 64 + 64 + 64 + 8 + 8 + 8 + 1 = 217 \text{ (Ratio)}$$

$$\textcircled{3} \quad CI - SI = 25 \rightarrow$$

$$\textcircled{4} \quad R = 11 \frac{1}{9}\% \quad 1^{\text{st}} \text{ yr} = \frac{1}{9}(P) \quad \text{find.}$$

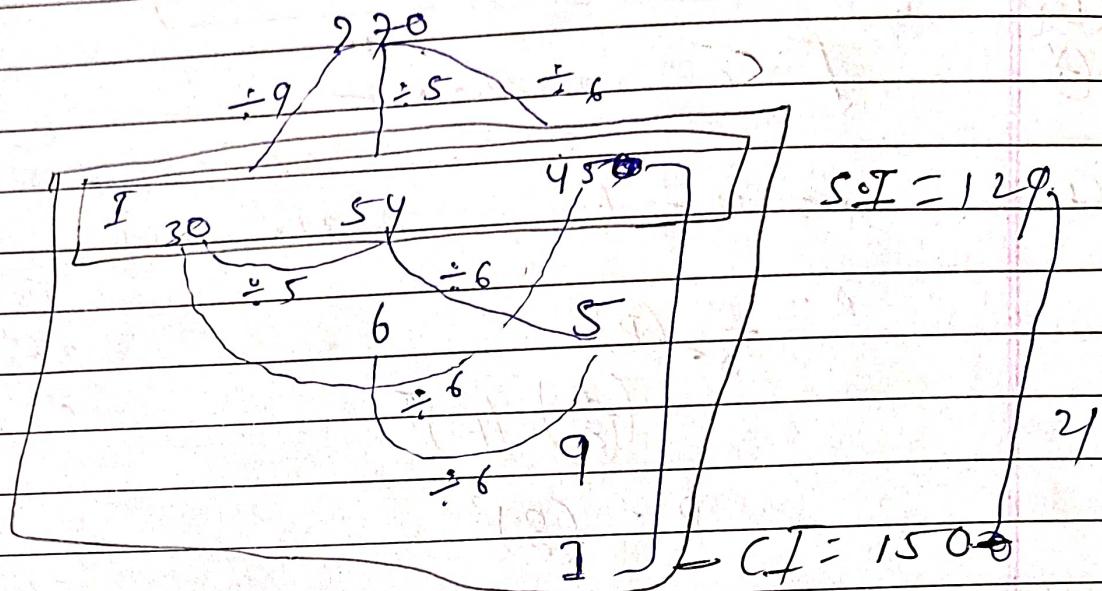
$$R = 20.1 \quad 2^{29} y = \frac{1}{5}(P) \quad CI = ?$$

$$2^{29} CI = ?$$

$$R = 16 \frac{2}{3}\% \quad 3^{29} y = \frac{1}{6}(P) \quad 3^{29} CI = ?$$

$$CI - SI = ?$$

Topper -  $P = 9 \times 6 \times 5$



① Total C.I =  $30 + 54 + 45 + 6 + 5 + 9 + 1$

$C.I = 150$

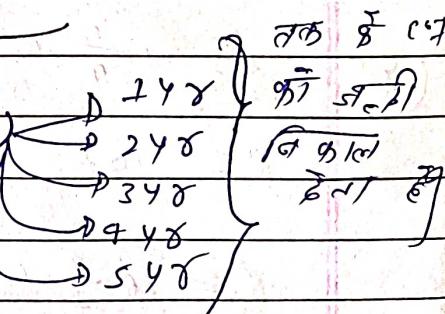
②  $270 - 150 = 54 + 6 = 60$

③  $270 \text{ years} = 45 + 5 + 9 + 1 = 60$

④  $C.I - S.I = 150 - 129 = 21 \Delta$

Multiply factors :-

26 वर्ष सकले 6 वर्ष whole (years)



Q:-

$$\textcircled{1} \quad T = 24\delta$$

$$R = 16 \frac{2}{3} \cdot 1.$$

$$= \frac{1}{6} (P)$$

$$= P = 6 \times 6 \text{ cal} (2 \text{ time} \div t = 2)$$

$$36 \times \frac{1}{6} = 6 \times 2^4 \cdot 12 \text{ (1 day)}$$

$$6 \times \frac{1}{6} = 1 \times 1 = 1$$

per cal 13 days

(2)

$$T = 44\delta$$

$$R = 16 \frac{2}{3} \cdot 1. = \frac{1}{6}$$

$$P = (6)^4$$

$$= 1296$$

$$1296 \times \frac{1}{6} = 216 \times 4 = 55$$

$$216 \times \frac{1}{6} = 36 \times 6 = \underline{\underline{CI - SI}}$$

$$216 \times \frac{1}{6} = 6 \times 4 = \underline{\underline{SI}}$$

$$6 \times \frac{1}{6} = 6 \times 1 =$$

per cal CI =

(2)  $T = 34\delta$ 

$$R = 16 \frac{2}{3} \cdot 1 = \frac{1}{6}$$

$$P = (6)^3$$

$$216$$

$$216 \times \frac{1}{6} = 36 \times 3$$

$$36 \times \frac{1}{6} = 6 \times 3$$

$$6 \times \frac{1}{6} = 1 \times 1$$

per cal  
Theorem

(X)

Parcel Toage:-

$$1 \begin{bmatrix} 2 & 1 \end{bmatrix} = 148$$

$$1 \begin{bmatrix} 3 & 3 & 1 \end{bmatrix} = 248$$

$$1 \begin{bmatrix} 4 & 6 & 4 & 1 \end{bmatrix} = 346$$

(1)

$$R = \frac{15T}{P^2} \quad T = 248$$

CI? , SJ? SF-SJ

$$R = \frac{3}{50}(P)$$

$$P = (20)^2$$

400

$$\frac{400 \times 3}{20} = 60 \times 2 = \boxed{120} \text{ SJ}$$

$$\frac{60 \times 2}{20} = 9 \times 1 = \boxed{9} \text{ CI}$$

$$\frac{9 \times 3}{10} = 129 = CI \cancel{SF}$$

$$CI - SF = 9$$

$$SF = 120 \quad \checkmark$$

(X)

$$R = 12.5 \quad T = 346 \quad P = 10,000 \quad CI = ?$$

$$12.5 \times 3 = 37.5$$

$$\frac{12.5 \times 12}{100} = 1.44 \times 3 = 4.32$$

$$\frac{1.44 \times 12}{100} = 1.728 \times 11 = 19.0028$$

$$100.040 \%$$

$$= 10000 \times \frac{42.048}{100}$$

$$= \cancel{4044.81} \quad 4049.28 \quad \checkmark$$

Concept Rate :-

Q1)  $P = 10,000$   $R_f$   $C.I = 1576.25$  @ CI  $R = ?$   
 $T = 340$

$$\begin{array}{r} 10,000 \\ \times 1576.25 \\ \hline 11576.25 \end{array}$$

$$\begin{array}{r} 10,000.00 \\ - 11576.25 \\ \hline 400.00 \\ - 463.05 \\ \hline \end{array}$$

$$\begin{array}{r} 3 \sqrt{8000} \\ \quad 20 \\ \quad \quad 21 \\ \quad \quad \quad 1 \\ \quad \quad \quad \quad 1 \times 100 = 49.5\% \end{array}$$

$$3 \sqrt{9261}$$

$$\begin{array}{r} 20 \\ \quad 21 \\ \quad \quad 1 \\ \quad \quad \quad 1 \\ \quad \quad \quad \quad 1 \times 100 = 49.5\% \end{array}$$

Q2) ₹ १०० बने २४८ में 25 times हो जाया Rate?

$$\begin{array}{r} 3 \sqrt{248} \\ \quad 21 \\ \quad \quad 25 \end{array}$$

$$\begin{array}{r} 1 \\ \quad 5 \\ \quad \quad 1 \\ \quad \quad \quad 1 \times 100 = 400\% \end{array}$$

$$\frac{4}{1} \times 100 = 400\%$$

Q3)  $\frac{4}{15}$  का ५7 ४४० में ६२५ से १२९६ हो जाया Rate?

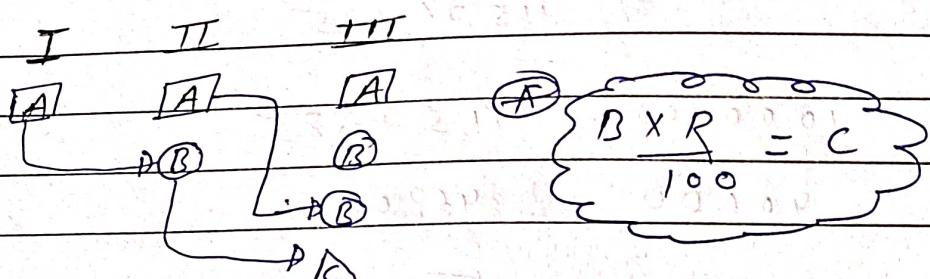
$$\begin{array}{r} 9 \sqrt{625} \\ \quad 6 \\ \quad \quad 5 \\ \quad \quad \quad 5 \end{array}$$

$$y \sqrt{1296}$$

$$\begin{array}{r} 1 \\ \quad 5 \\ \quad \quad 6 \\ \quad \quad \quad 6 \\ \quad \quad \quad \quad 1 \times 100 = 20\% \end{array}$$

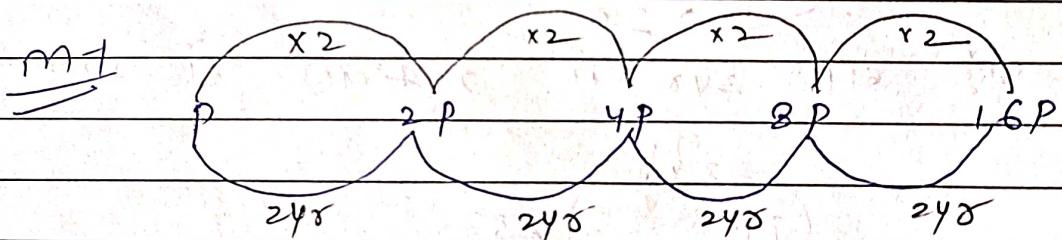
Q:- II ०४ की CT = 210 RF  
 III ०४ की CT = 252 RF  
 $\frac{252}{210} \times 100 = 20\%$

~~(\*)~~ Tree method find rate for T-348



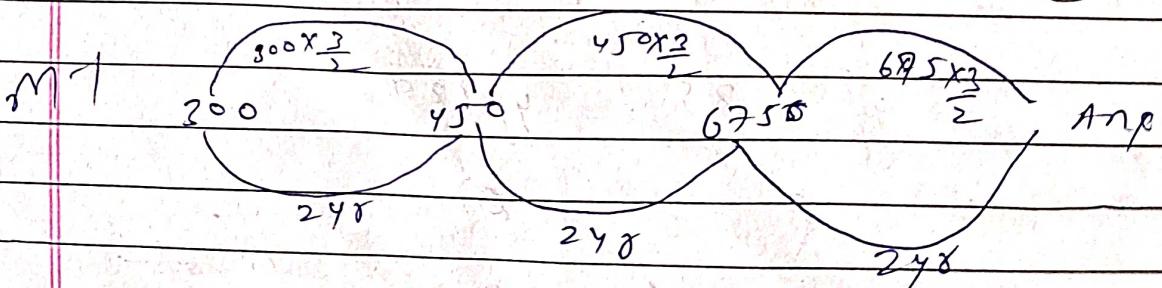
~~Time की रेलिंग की घटना की जाता है।~~

Q:- कोई ET 248 में 2 time हो।  
 848 में किसे क्या करा दीजिए।



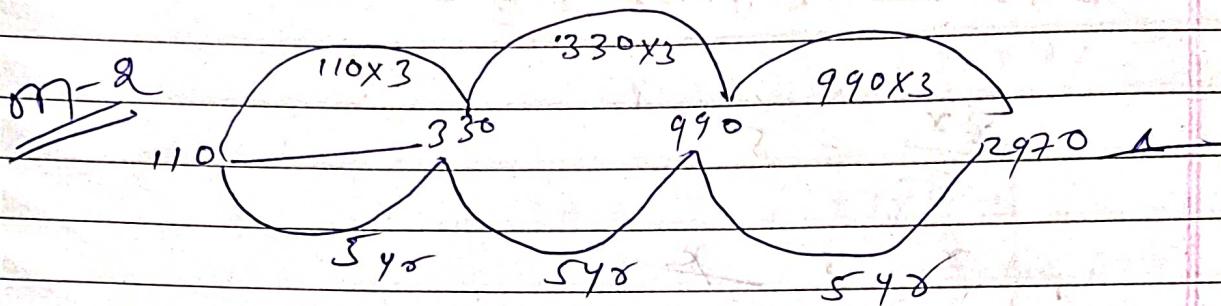
$$2t + Anr = 16 \text{ of } 11$$

Q:- 300 RF, 248 में 450 की जाने की घटना की  
 648 की 18 अंकी की जाने की CT



Q:

$$110 \rightarrow 54 \text{ s} - 330 \text{ sec} \rightarrow 14 \text{ min } 15 \text{ sec } 50 \text{ s} @ CI$$



Ex 2

$$(n_1)^{1/t_1} = (n_2)^{1/t_2}$$

Ans

Q:

$$24 \text{ yr} \rightarrow 8 \text{ time} @ CI$$

$$24 \text{ yr} \rightarrow 64 \text{ time}$$

$$(8)^{1/2} = (64)^{1/2}$$

base same karo

$$(8)^{1/2} = (8^2)^{1/2}$$

$$8^{1/2} = 8^{2/2}$$

$$\frac{1}{2} = \frac{2}{2}$$

$$x = 4 \times 1 \cdot 0$$

Q2

$$540 \rightarrow 2 \text{ time}$$

$$240 \rightarrow 16 \text{ time}$$

$$2^{16}$$

$$x = 5 \times 4$$

$$x = 20$$

$$\textcircled{1} \quad 348 - 2 \text{ time } \rightarrow 3^3 \\ 548 - x \text{ time } \rightarrow 3^x$$

$$\frac{3x}{3} = 5$$

$$x = 5$$

$$= 3^5 = 243 \cancel{x}$$

Ex

## Installment @ CI

$$\textcircled{2} \quad R = 10\% = \frac{1}{10} \quad \text{2st yr} \quad 10 \quad 11$$

$$\textcircled{3} \quad R = 10\% = \frac{1}{10} \quad 20yr \quad 10 \times 11 \quad 11 \times 11 \quad \frac{(P \times 10)}{121} \quad \text{Installments}$$

$$\begin{array}{r} 100 \\ \times 10 \\ \hline 1000 \\ + \quad \quad \quad \text{some} \\ \hline 210 \\ \text{principle} \end{array}$$

$$\begin{array}{r} 100 \\ \times 10 \\ \hline 1000 \\ + \quad \quad \quad 100 \\ \hline 200 \\ \text{Amount} \end{array}$$

$$\text{Interest} = \text{Amount} - P =$$

$$= 242 - 210 = 32$$

$$\textcircled{4} \quad R = 16\frac{2}{3}\% = \frac{1}{6} \quad 245 \quad 6 \times 7 \quad 7 \times 7 = 49$$

$$\begin{array}{r} 36 \\ \times 7 \\ \hline 252 \\ + \quad \quad \quad 49 \\ \hline 291 \end{array}$$

$$78 : 98 \\ \text{point} \quad 4$$

$$\text{Installment} = 49$$

$$I = 98 - 78 = 20$$

$$\text{Given } R = 10\% \quad T = 3 \text{ years} \quad \text{Installment}$$

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

$$1210 = 10 \times 11 \times 11 \quad 11 \times 11 \times 11 = 1331$$

$$1100 = 100 \times 11 \quad 121 \times 11$$

$$1000 = 1000$$

$$\begin{array}{r} 3310 \\ P \end{array}$$

$$\underline{1331}$$

$$\underline{3993}$$

A

some + 20

$$\text{Installment} = 1331 - \cancel{20} \quad \text{Retro}$$

$$C.I. = 683 \quad \text{Retro}$$