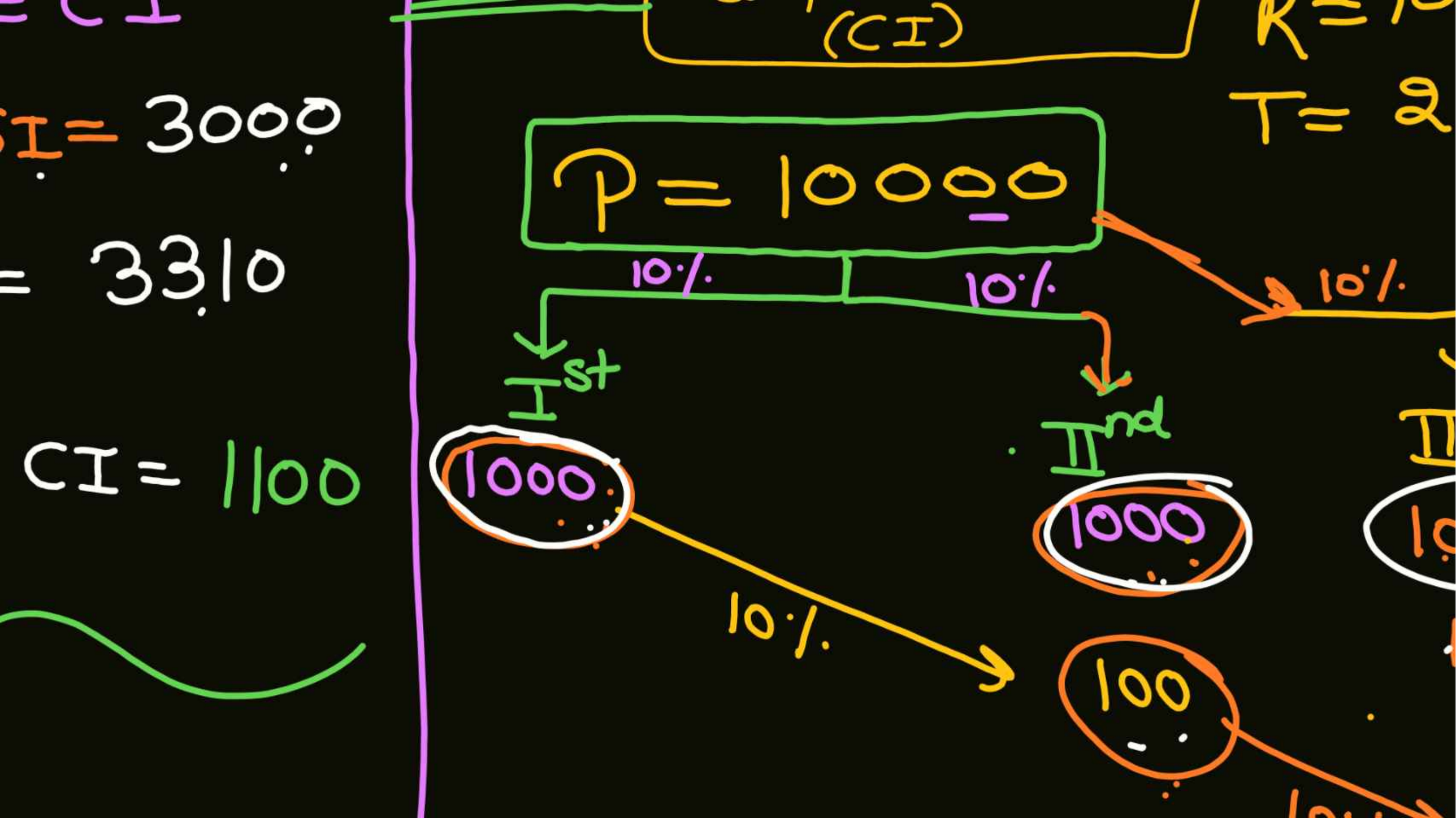
# Foundation Batch

# MATHS

## Compound interest

## (चक्रवृद्धि ब्याज)

LIVE 17-07-2024 07:00PM


(CI)
P = 10000
10%
10%
10%
I st
II nd
1000
1000
10%
100
T= 2
CI = 1100

$20\% = \frac{+1}{5}$

# Ratio Method

$P = 5000$

$R = 20\%$ वार्षिक

$T = 2$ वर्ष

$CI = ?$

5 — 6

5 — 6

25 — 36 → मिश्रधन (A)

मूलधन (P) ←

diff = 11 → CI

5000

1 → $\frac{5000}{25}$ → 200

11 × 200

2200

36 × 200

= 7200/-

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

ex.

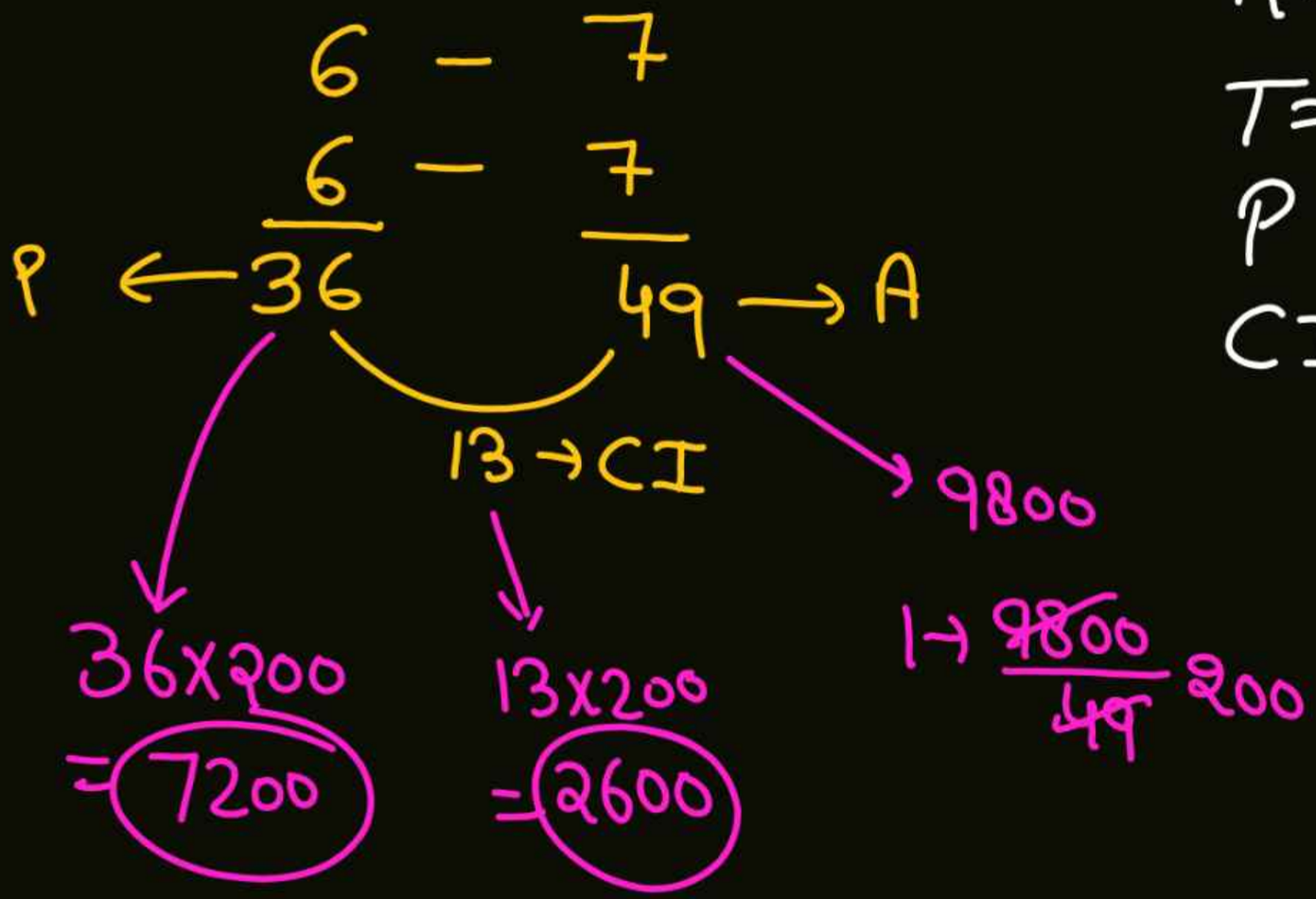
$A = 9800$

$R = 16\frac{2}{3}\%$ वार्षिक

$T = 2$ वर्ष

$P = ?$

$CI = ?$



# 2 वर्ष CI का Formula.

a% b%

$$2CI = a + b + \frac{a \times b}{100}$$

Ex. R = 10%
T = 2 वर्ष

$\longrightarrow$ 2SI = 10% × 2
= 20%

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

20 + 1 = 21%

2CI − 2SI = 21 − 20
= 1%

$R = 5\%$
$T = 2$ वर्ष
$2CI = ?$

$\longrightarrow 2SI = 5\% \times 2$
$10\%$

Effective Rate
प्रभावी दर

$\Rightarrow 5 + 5 + \frac{5 \times 5}{100}$

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

$10 + 0.25 = 10.25\%$

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

$20 - 21$
$20 - 21$
$400 \quad 441$

$CI = 41$

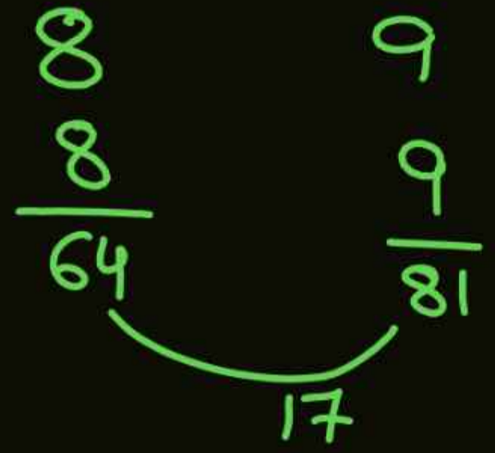
$\% = \frac{41}{400} \times 100 = 10.25\%$

$2CI - 2SI$
$10.25 - 10$
$= 0.25\%$

$R = 12\frac{1}{2}\% = \frac{11}{8}$

$T = 2$ वर्ष

$2CI = ?$




$\% = \frac{17}{64} \times \frac{25}{100} = \frac{425}{16}\% = 26.5\%$

$I^{st}$ year $= R_1 = 12\frac{1}{2}\%$

$II^{nd}$ year $= R_2 = 16\frac{2}{3}\%$

2 CI =

$12\frac{1}{2}\% = \frac{+1}{8}$ $\quad$ $16\frac{2}{3}\% = \frac{+1}{6}$

$8 - 9$

$6 - 7$

$48 \quad 63$

$15$

$\% = \frac{15}{48} \times 100 = \frac{125}{4}\%$

$= 31.25\%$

# 3 वर्ष के CI का formula.

a% b% c%

$$\text{effective Rate} = \left[(a+b+c) + \frac{ab+bc+ac}{100} + \frac{abc}{10000}\right]\%$$

ex

R = 10%
T = 3 वर्ष
3CI = ?

10% 10% 10%

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

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

$$3CI = 30+3+0.1 = 33.1\%$$

3SI = 10% × 3
= 30%

3CI − 3SI
33.1 − 30
= 3.1%

$I^{st} = 2\%$

$II^{nd} = 3\%$

$III^{rd} = 4\%$

$3CI = ?$

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

$$9 + \frac{6+12+8}{100} + \frac{24}{10000}$$

$$9 + \frac{26}{100} + 0.0024$$

$$9 + 0.26 + 0.0024$$

$$9.26$$
$$0.0024$$
$$\overline{9.2624\%}$$