

$x\%$, $y\%$

SUCCESSIVE

SD/ED/SD SI/CI

$$ED = \left(x + y - \frac{xy}{100} \right) \% \quad CI = \left(x + y + \frac{xy}{100} \right) \%$$

$x\%$, $y\%$

$$CI = \left(\underbrace{x+y}_{\text{Rate}} + \frac{xy}{100} \right) \%$$

$$SI = (x+y) \%$$

$$CI - SI = \frac{xy}{100} \%$$

$$CI \geq 3+7+\frac{3 \times 7}{100}$$

$$\Rightarrow 10 + 0.21$$

$$CI \Rightarrow 10.21\%$$

$$P = 2000 \text{ ₹}$$

$$\text{Rate \%} \Rightarrow \begin{cases} I = 3\% \\ II = 7\% \end{cases}$$

$$CI = \frac{2000 \times 10.21}{10000}$$

$$CI \Rightarrow 204.20 \text{ ₹}$$

$$CI = \frac{11}{10} \rightarrow \begin{array}{c} CI \\ \swarrow \downarrow \searrow \\ 10 \end{array} \rightarrow P$$

$$\text{Rate \%} = x\% , y\%$$

$$\text{C.I} \quad = \left(x + y + \frac{xy}{100} \right) \%$$



Effective rate

$$(\text{C.I} - \text{S.I}) = \left(\frac{x \times y}{100} \right) \%$$

Rate % = x% , y%

1% 2%

2% 3%

3% 4%

4% 5%

5% 6%

$\frac{27}{1.8}$ 6% 7%

$\frac{27}{1.8}$ 10% 8%

11% 12%

9% 13%

11% 19%

20% 21%

12% 15%

20% 25%

30% 6%

C.I = $\left(x + y + \frac{xy}{100} \right) \%$

= 3.02%

= 5.06%

= 7.12%

= 9.20%

= 11.30%

= 13.42%

= 18.80%

= 24.32%

= 23.17%

= 32.09%

= 45.20%

= 28.80%

= 50%

= 37.8%

Some rates of CI

1% , 2%

1% , 5%

2% , 3%

12% , 5%

4% , 3%

3% , 5%

2% , 9%

12% , 8%

13% , 10%

11% , 11%

9% , 12%

13% , 10%

12% , 15%

$$\text{Final rates of CI} = \left[x + y + \frac{x \times y}{100} \right]$$

3.02 % =

6.05 % =

5.06 % =

17.60 % =

7.12 % =

8.15 % =

11.18 % =

20.96 % =

23.30 % =

23.21 % =

22.08 % =

24.30 % =

28.80 % =

Rate**1%****2%****3%****4%****5%****6%****7%****11%****12%****13%**

$$\text{Final rate of CI for 2 yrs} = \left[x + y + \frac{x \times y}{100} \right]$$

$$= 2.01\%$$

$$= 4.04\%$$

$$= 6.09\%$$

$$= 8.16\%$$

$$= 10.25\%$$

$$= 12.36\%$$

$$= 14.49\%$$

$$= 23.21\%$$

$$= 25.44\%$$

$$= 27.69\%$$

1. Principal (मूलधन) = 2000

Rate (दर) = 10% p.a

Time (समय) = 2 year

C.I (चक्रवृद्धि ब्याज) = ?



$$\frac{2000 \times 2}{100}$$

420 ₹

$$\begin{aligned} C.I &= P + \frac{P}{100} \times \\ &= 10 + 10 + \frac{10 \times 10}{100} \\ &\text{Ans.} \end{aligned}$$

2. Principal (मूलधन) = 1000

Rate (दर) = 3% p.a

Time (समय) = 2 year

C.I (चक्रवृद्धि ब्याज) = ?

$$\frac{1000 \times 6.09}{100}$$

$$3 + 3 + \frac{3 \times 3}{100}$$

6.09%

60.9

3. Principal (मूलधन) = 1700

Rate (दर) = 11% p.a

Time (समय) = 2 year

C.I (चक्रवृद्धि ब्याज) = ?

$$\frac{1700 \times 23.2}{100}$$

394.57

4. Principal (मूलधन) = ?

Rate (दर) = 17% p.a

Time (समय) = 2 year

C.I (चक्रवृद्धि ब्याज) = 368.9

$$P \times \frac{368.9}{1000} = \frac{368.9}{17}$$

$$P = 100$$

5. Principal (मूलधन) = 2500

Rate (दर) = 19% p.a

Time (समय) = 2 year

C.I (चक्रवृद्धि ब्याज) = ?

1040.25

$$\frac{2500 \times 19}{100}$$

475

4

$$CI = 23.21$$

$$P \quad A \\ 10000 \quad : \quad 123.21$$

$$10,000 \quad : \quad 12321$$

6. Principal (मूलधन) = 750

Rate (दर) = 11% p.a

124.075 Time (समय) = 2 year

Amount (मिश्रधन) = ?

$$\begin{array}{r} 1240.75 \\ 36963 \leftarrow \frac{750}{1000} \times 12321 \\ \hline 4 \times 10 \quad 40 \end{array}$$

7. Principal (मूलधन) = 3000

Rate (दर) = 7% p.a

Time (समय) = 2 year

Amount (मिश्रधन) = ?

$$\begin{array}{rcl} & 14.49 \times \\ P & A \\ 1000 & : & 114.49 \end{array}$$

$$\begin{array}{r} 3434.7 \\ \underline{\times 11449} \\ \hline 10447 \end{array}$$

**8. Principal (मूलधन) = 5000
Rate (दर) = 11%
Time (समय) = 2 year
Amount (मिश्रधन) = ?**

$$CI = \left(x + y + \frac{xy}{100} \right) /$$

$$SI = (x+y) /$$

$$CI - SI = \frac{xy}{100} /$$

$$\Rightarrow 0.36\%$$

9. Principal (मूलधन) = ?

Rate (दर) = 6% p.a

Time (समय) = 2 year

$$(C.I - S.I) = 10.8$$

$$P \times \frac{0.36}{1000} = \frac{10.8}{16}$$

$$P = 3000$$

10. Amount (मिश्रधन) = ?

Rate (दर) = 3% p.a

Time (समय) = 2 year

C.I - S.I = 2.7

$$\frac{0.09}{100} \rightarrow C.I - S.I$$

$$\frac{2.7}{0.09} \times 1000$$

3000

11. Amount (मिश्रधन) = ?

Rate (दर) = 6% p.a

Time (समय) = 2 year

$$\frac{0.36}{100} \quad (C.I - S.I) = 7.56$$

$$\frac{84.21}{36} \times 100 = 2100$$

$$CI - SI = 0.04 \%$$

$$CI = 4.04 \%$$

$$A = 104.04 \%$$

$$CI - SI$$

$$0.04$$

$$\downarrow \times 16$$

$$16\%$$

$$A$$

$$104.04$$

$$2601 \downarrow \times 16$$

$$41616$$

12. Amount (मिश्रधन) = ?

Rate (दर) = 2% p.a

Time (समय) = 2 year

(C.I - S.I) = 16

0.64 ✗

13. Principal = Rs. 4000, Rate = 8%, Time =
2 year. Find CI - SI = ?

मूलधन = Rs. 4000, समय = 2 वर्ष, दर = 8%
(चक्रवृद्धि ब्याज-साधारण ब्याज) = ?

- ~~A.~~ 25.6 B. 10 C. 15.5 D. 20

$$\frac{4000 \times 0.64}{100}$$

₹ 5.6

14. Principal (मूलधन) = 2000

Rate (दर) = 3% , 2%

Time (समय) = 2 year

C.I – S.I (चक्रवृद्धि ब्याज - साधारण ब्याज) = ?

₹५०० ₹०.०६

15. Principal (मूलधन) = 1000

Rate (दर) = 2% , 3%

Time (समय) = 2 year

S.I (चक्रवृद्धि ब्याज) = ?

$$1000 \times 5.06 \%$$

16. Principal (मूलधन) = 1700

Rate (दर) = 1% , 5%

Time (समय) = 2 year

C.I (चक्रवृद्धि ब्याज) = ?



17. Principal (मूलधन) = ?

Rate (दर) = 4% , 3%

Time (समय) = 2 year

$$(C.I - S.I) = \frac{10.8}{5+2} \times 1000$$

१०८

$$C.I = 6.05\%$$

C.I - S.I

0.05

∴

+06.05

A

2121 × 1.5

3181.5

1
↓
1.5

18. Amount (मिश्रधन) = ?

Rate (दर) = 1% , 5%

Time (समय) = 2 year

C.I - S.I = 1.5

19. Principal (मूलधन) = ?

Rate (दर) = 3% , 5%

Time (समय) = 2 year

C.I (चक्रवृद्धि ब्याज) = 48.9



$$C.I = 28.8 \%$$

$$\begin{array}{r} A \\ + 28.8 \\ \hline 644 \end{array} \quad \begin{matrix} 0 \\ 0 \\ 0 \end{matrix} \quad \begin{array}{r} \times 1.6 \\ \hline 1030.4 \end{array}$$

$$\begin{array}{r} C.I - S.I \\ + 8 \\ \hline 9 \end{array} \quad \begin{array}{l} \xleftarrow{\quad \times 1.6 \quad} \\ 14.4 \end{array}$$

20. Amount (मिश्रधन) = ?

Rate (दर) = 12% , 15%

Time (समय) = 2 year

(C.I - S.I) = 14.4

21. Principal (मूलधन) = 2500

Rate (दर) = 13% , 10%

Time (समय) = 2 year

C.I (चक्रवृद्धि ब्याज) = ?



22. Amount (मिश्रधन) = ?

Rate (दर) = 2% , 9%

Time (समय) = 2 year

(C.I – S.I) = 4.5



$$CI = 20.96\%$$

$$\begin{array}{ccc} P & & A \\ 100\% & \times & \% \\ & & 120.96\% \end{array}$$



23. Principal (मूलधन) = 750

Rate (दर) = 12% , 8%

Time (समय) = 2 year

Amount (मिश्रधन) = ?

24. Principal (मूलधन) = 3000

Rate (दर) = 5% , 12%

Time (समय) = 2 year

Amount (मिश्रधन) = ?



25. Principal (मूलधन) = 5000

Rate (दर) = 11% , 6%

Time (समय) = 2 year

Amount (मिश्रधन) = ?



0.35 %

$$\frac{35}{100} \times \frac{0.35}{100}$$

$$\frac{7}{10}$$

26. Principal (मूलधन) = 2000
Rate (दर) = 5% , 7%
Time (समय) = 2 year
C.I - S.I (चक्रवृद्धि ब्याज - साधारण ब्याज) = ?

~~A. 7~~

C. 5.7

B. 5

D. 7.5

27. Principal (मूलधन) = 2000

Rate (दर) = 8% $\frac{8}{100} \times$

CI - SI = $\frac{P \times R}{100} \times$ Time (समय) = 1 year 3 month

$\Rightarrow \frac{8 \times 2}{100} \Rightarrow 0.16\%$ C.I - S.I (चक्रवृद्धि ब्याज - साधारण ब्याज) = ?

A. 32

B. 3.8

C. 12

~~D.~~ 3.2

$$\frac{2000 \times 0.16}{100}$$

3.2 ₹

28. Principal (मूलधन) = ?

Rate (दर) = 10% $\frac{10}{100} \times 5\%$

Time (समय) = 1 year $\frac{1}{12}$ 6 month

C.I - S.I = 12

$$\frac{10 \times 5}{100} \%$$

0.5 %

$$P \times \frac{0.5}{1000} = 12$$

$$\frac{10 \times 8}{12} \times 5\%$$

$$P = 2400$$

29. Amount (मिश्रधन) = ?

Rate (दर) = 12%

Time (समय) = 1 year 3 month

C.I = 384



30. Principal (मूलधन) = 4500

Rate (दर) = 18%

Time (समय) = 1 year 2 month

C.I – S.I (चक्रवृद्धि ब्याज - साधारण ब्याज) = ?



31. Principal = ?, Time = 1 year 6 month

Rate = 6%, CI = Rs. 4590

मूलधन = ?, समय = 1 वर्ष 6 महिने, दर = 6%

चक्रवृद्धि ब्याज = ₹ 4590 $\frac{6\%}{12} \times 3\%$

$$P \times \frac{9.18}{100} = 4590$$

A. 80,000

B. 50,000

C. 35,000

D. 60,000

$$6 + 3 + \frac{6 \times 3}{100}$$

9.18%

32. Principal (मूलधन) = ?

Rate (दर) = 15%

Time (समय) = 1 year 4 month

C.I – S.I = 26.25



33. Principal (मूलधन) = 10,000

Rate (दर) = 12%

Time (समय) = 1 year 8 month

C.I = ?

34. Principal (मूलधन) = 2000

Rate (दर) = 5% $\frac{5}{100}$ $\frac{1}{20}$

Time (समय) = 1 year $\frac{73}{365}$ days

C.I (चक्रवृद्धि ब्याज) = ?

$$2000 \times 6.05 \quad | \times \\ \hline 10000 \quad | \times \\ 121 \cancel{\$} \rightarrow 121 \text{ ₹} \quad 5 + 1 + \frac{5 \times 1}{100} \quad | \times \\ \hline 6.05 \% \quad \frac{51 \times 73}{365}$$

35. Principal (मूलधन) = ?

Rate (दर) = 25%

Time (समय) = 1 year 73 days

C.I (चक्रवृद्धि ब्याज) = 625



36. Amount (मिश्रधन) = ?

Rate (दर) = 15%

Time (समय) = 1 year 73 days

C.I (चक्रवृद्धि ब्याज) = 590.4



37. Principal = ?, Rate = 5%, Time = 1 year

73 days, CI = Rs. 302.50

**मूलधन = ?, समय = 1 वर्ष 73 दिन, दर = 5%,
चक्रवृद्धि ब्याज = रु 302.50**

- A. 5,000**
- B. 4,000**
- C. 3500**
- D. 6,000**



38. Principal (मूलधन) = 1800

Rate (दर) = 50%

Time (समय) = 1 year 73 days

C.I – S.I = ?



$$r = 7\% \text{ p.h}$$

t = 2 half

$$\text{CI-SI} = \frac{7 \times 7}{100} \% = 0.49\%$$

39. Principal (मूलधन) = ?

Rate (दर) = 14% p.a

Time (समय) = 1 year

(C.I - S.I) = 17.15



(Compounded half-yearly)

अर्ध वार्षिक

$$\frac{P \times 0.49}{100} = \frac{17.15}{245.35}$$

$$P = \frac{17.15 \times 100}{49/2} = 3500 \text{ £}$$

40.Principal (मूलधन) = 6000

Rate (दर) = 18% p.a

Time (समय) = 1 year

C.I = ?



(Compounded half-yearly)



$$r = 9\%$$

t = 2 cycle.

$$9 + 9 + \frac{9 \times 9}{100} \Rightarrow 18.81\%$$

$$\frac{1500 \times 18.81}{100}$$

$$282.15$$

$$18 \ 12$$

41. Principal (मूलधन) = 1500

Rate (दर) = 12% p.a

Time (समय) = 1 year 6 month

C.I. = ?



(Compounded every 9 month)

$$\frac{18}{9}$$

2 Cycle

$$\frac{12 \times 9}{12}$$

42. Principal (मूलधन) = 1800

Rate (दर) = 24% p.a = $\frac{16}{100}$ ×

Time (समय) = 16 month = $\frac{2}{3}$ year

C.I = ?



(Compounded every 8 month)

$$\frac{94}{100} \times 18$$

43. Principal (मूलधन) = 1100

Rate (दर) = 36% p.a

Time (समय) = 10 month

C.I = ?



(Compounded every 5 month)

$$C.I = 12.36 \%$$

$$C.I - S.I = 0.36 \%$$

$$C.I - S.I$$

$$\cancel{0.36}$$

$$\frac{9}{9+0.72} = \frac{9}{12} = 0.72$$

$$6.48$$

A

$$\therefore 112.36 \quad \left(\frac{2809 \times 0.72}{12} \right)$$

44. Amount (मिश्रधन) = ?

Rate (दर) = 9% p.a = 6%

Time (समय) = 1 year 4 month

$$(C.I - S.I) = 6.48$$

$$\frac{16}{48} = 2 \text{ cy}$$



(Compounded every 8 month)

$$\frac{9 \times 8}{12} = 6\%$$

$$\begin{array}{r} 2809 \\ \times 0.72 \\ \hline 1966.3 \\ 56.18 \\ \hline 2029.48 \end{array}$$

2809

0.1 → 280.9

0.01 → 28.09

0.02
0.70

45. Principal (मूलधन) = ?

Rate (दर) = 26% p.a

Time (समय) = 1 year

C.I = 415.35



(Compounded every 6 month)



46.Amount (मिश्रधन) = ?

Rate (दर) = 12% p.a

Time (समय) = 16 month

C.I = 515.84



(Compounded every 8 month)

$$x \vee, y \vee$$

$$x+y+\frac{xy}{10}$$

i. $\underbrace{1\%}_{}, \underbrace{2\%}_{}, 3\%$

$3.02\%, 3\%$
 $\underbrace{\quad\quad\quad}_{}$

$$3.02 + 3 + \frac{3.02 \times 3}{100}$$

$$\begin{array}{r} 6.02 \\ - 0.0906 \\ \hline 6.1106\% \end{array}$$

2%, 3%, 4%

5.06%, 4%

$$\begin{array}{r} 9.06 \\ - 2024 \\ \hline 9.2624\% \end{array}$$

ii. 2%, 3%, 4%

5.06%, 4%

$$5.06 + 4 + \frac{5.06 \times 4}{100}$$

$$\begin{array}{r} 9.06 \\ - .2024 \\ \hline 9.2624\% \end{array}$$

iii. 3% , 4% , 5%

7.12% , 5%

$$\begin{array}{r} 12.12 \\ 3560 \\ \hline 12.4760\% \end{array}$$

iv. 4% , 5% , 6%

9.2 , 6

$$\begin{array}{r} 15.2 \\ .552 \\ \hline 15.752 \end{array}$$

v. 2% , 5% , 7%

7.1% , 7%

$$\begin{array}{r} 14.1 \\ .497 \\ \hline 14.597 \end{array}$$

vi. $\underbrace{3\% , 1\%}_{\text{in brackets}} , 12\%$

4.03, 12

$$\begin{array}{r} 16.03 \\ \cdot 4836 \\ \hline 16.5136 \end{array}$$

vii. $\underbrace{2\% , 2\% , 2\%}$

$$\begin{array}{r} \boxed{4.04\% + 2\% + \frac{4.04 \times 2}{100}} \\ \checkmark \end{array} \quad \begin{array}{l} 4.04\% , 2\% \\ 6.04\% \\ \hline .0808 \\ \hline 6.1208\% \end{array}$$

viii. 5% , 5% , 5%

10.25% , 5

$$\begin{array}{r} 15.25 \\ .5125 \\ \hline 15,7625 \end{array}$$

xi. $\underbrace{10\%}_{21\%}, \underbrace{10\%}_{,}, \underbrace{10\%}_{21\%}, \underbrace{10\%}_{,}$

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

$$42 + 4.41$$

46.41%

20%, 20%, 20%, 20%

44²

44%, , 44%

1936

44 + 44 + $\frac{44 \times 44}{100}$

$$\begin{array}{r} 88 + \\ 19.36 \\ \hline 107.36 \end{array}$$

Rate (in %)

a

1%

2%

3%

4%

5%

6

7

8

9

10

Final rate after 3 years

$$= 3a \cdot \underline{3a^2} \underline{a^3 \%}$$

$$= 3 \cdot 0301 \%$$

$$= 6 \cdot 1208 \%$$

$$= 9 \cdot 2727 \%$$

$$= 12 \cdot 4864 \%$$

$$= 15 \cdot 7625 \%$$

=

=

=

=

$$= 33.1 \%$$

CI-SI (diff.) after 3 years

$$= . 3a^2 a^3 \%$$

=

=

=

=

=

=

=

=

=

$$3a \cdot \frac{3a^2}{\cancel{1}} \frac{a^3}{\cancel{1}}$$
$$5\% \rightarrow 15.\underline{7}5\underline{2}5$$
$$15.7625\%$$

$$3a \cdot \frac{3a^2}{\square} \frac{a^3}{\square}$$
$$6\% \rightarrow 18 \cdot \underline{08^2} \underline{16}$$
$$19.1016\%$$

$$3a \cdot \frac{3a^2}{\square} \frac{a^3}{\square}$$
$$7\% \rightarrow \begin{array}{r} 1 \\ 21,4743 \end{array}$$

22.5043%

$$3a \cdot \frac{3a^2}{\cancel{a}} - \frac{a^3}{\cancel{a}}$$
$$8 \times \rightarrow \frac{1}{2^4} \cdot 9^{\frac{5}{2}} \cancel{12}$$

25.9712%

$$10\% \rightarrow \begin{array}{r} 3a \cdot \frac{3a^2}{\cancel{1}} \frac{a^3}{\cancel{1}} \\ \hline 30 \cdot \overset{3}{0} \overset{10}{0} \quad 00 \\ \hline 33.1000 \end{array}$$

33.1%

4 ye \rightarrow CI = 46.41%

$$CI = 33.1\%$$

$$\underline{SI = 3\%}$$

$$CI - SI = 3.1\%$$

$$P \times \frac{3.1}{100} = \frac{279}{1}$$

$$P = 9000$$

47. If the difference between the compound interest and the simple interest on a certain sum of money for 3 years at 10% per annum, compounded annually, is Rs. 279, then find the amount (in Rs.)

यदि एक निश्चित धनराशि पर, 3 वर्षों के लिए 10% वार्षिक दर से, वार्षिक रूप से चक्रवृद्धि होने वाला ब्याज और साधारण ब्याज का अंतर रु. 279 है तो वह धनराशि (रु. में) ज्ञात करें।

- A. 10,000
- B. 9,000
- C. 7,500
- D. 8,000

$$\begin{array}{r}
 CI = 72.8 \checkmark \\
 SI = 60 \checkmark \\
 \hline
 12.8 \checkmark \\
 \\
 P \times \frac{12.8}{100} = 448 \\
 \hline
 50
 \end{array}$$

48. The difference between the interest payable on a sum invested for three years at 20% compound interest per annum compounded annually and 20% simple interest per annum for the same period is Rs. 448. What is the value of the sum invested?

तीन वर्षों के लिए निवेश की गई राशि पर 20% वार्षिक चक्रवृद्धि ब्याज पर देय ब्याज और समान अवधि के लिए 20% साधारण ब्याज के बीच का अंतर 448 रुपये है। निवेश की गई राशि क्या है?

- A. Rs. 3750
- B. Rs. 4000
- C. Rs. 3500
- D. Rs. 3000

$$20\% \Rightarrow$$
$$\begin{array}{r} 3a \cdot \underline{\underline{3a^2}} - \underline{\underline{a^2}} \\ \underline{\underline{60 \cdot 00 \quad 00}} \\ 72.8000 \end{array}$$

72.8%

15%, 15%, 10%

32.25%, 10%

$$\begin{array}{r} 42.25 \\ 3.225 \\ \hline 45.475\% \\ \boxed{1015} \\ \hline \text{₹} 10,000 \times 45.475 \\ \hline +0.5 \end{array}$$

49. The compound interest on a sum of Rs. 20,000 at 15% p.a for $2\frac{2}{3}$ years, interest compounded yearly is.

ब्याज की गणना वार्षिक चक्रवृद्धि आधार से करते हुए, यद्यपि 20,000 की राशि पर, वार्षिक 15% की दर से $2\frac{2}{3}$ वर्ष में प्राप्त चक्रवृद्धि ब्याज ज्ञात कीजिए।

- A. Rs. 9,098
- B. Rs. 8,896
- C. Rs. 9,000
- D. Rs. 9,095

10, 10, 5

21%, 5%

$$P \times 27\% = \underline{1623}$$

50. The compound interest on a certain sum in $2\frac{1}{2}$ years, at 10% p.a interest compounded yearly is 1623 then sum is:

एक निश्चित राशि पर $2\frac{1}{2}$ वर्षों में 10% वार्षिक चक्रवृद्धि ब्याज की दर से चक्रवृद्धि ब्याज 1623 रु. है, तो राशि है:

A. ~~Rs. 5000~~

C. Rs. 6500

B. ~~Rs. 6000~~ $\times 27\%$

D. Rs. 7200

$$\begin{array}{r} 180 \\ - 180 \\ \hline 1620 \end{array}$$

15, 15, 6

CI = 40%

A = 140%

P
+
160
5
 $\times 60\%$

A
+
140
7
 $\times 60$

51. A certain sum amounts Rs. 4205.55 at 15% per annum in $2\frac{2}{5}$ years interest compounded yearly. The sum is?

एक निश्चित राशि 15% प्रति वर्ष की दर से $2\frac{2}{5}$ वर्षों में वार्षिक चक्रवृद्धि ब्याज पर 4205.55 रु. योग है?

- A. Rs. 2700
- B. Rs. 3500
- C. ✓ Rs. 3000
- D. Rs. 3200

52. Principal = Rs. 8000, Rate for 1st year = 1%, Rate for 2nd year = 2%, Rate for 3rd year = 3%, CI - SI = ?

मूलधन = Rs. 8000, समय = 3 वर्ष, दर = पहले वर्ष 1%, दूसरे वर्ष 2%, तीसरे वर्ष 3%, (चक्रवृद्धि ब्याज - साधारण ब्याज) = ?

$$\frac{8000 \times 0.1106}{100}$$

8848

✓ 8.848

A. 15

B. 20

D. 10.48

1, 2%, 3%

3.02%, 3%

6.02

.0906

$$\overline{CI = 6.1106\%}$$

$$\overline{SI = 6 \quad \%}$$

$$\overline{0.1106\%}$$

**53. Principal = ?, Time = 3 year. Rate for
1st year = 5%. Rate for 2nd year = 4%.
Rate for 3rd year = 3%, CI = Rs. 12476**

$$\frac{P \times 12476}{100000} = 12476$$

**मूलधन = ?, समय = 3 वर्ष, दर = पहले वर्ष 5%,
दूसरे वर्ष 4%, तीसरे वर्ष 3%, चक्रवृद्धि ब्याज =**

Rs. 12476

~~A. 1 Lakh~~

C. 8 Lakh

B. 5 Lakh

D. 7 Lakh

5 × , 4 × , 3 ×

9.2 × , 3

$$\begin{array}{r} 12.2 \\ \cdot 276 \\ \hline 12.476 \end{array}$$

Extra question

20% की Compound Interest की Rate है किंतु

प्रत्येक वर्ष 2 गुना / 2 Times हो जाएगा

P = 100 → 20%	R	1 year	120
100 → 20%		2 years	144

4 वर्षात् complete

$$P = 100, R = 20\%$$

1 year CI 20% Amt. 120

4 साल

2 years CI 44% Amt. 144

3 years CI 72.8% Amt. 172.8

4 years CI 107.36% Amt. 207.36

Double Money

અધ્યાત્મ અપ્રોક્ષ.

1. 72 rule :-

$$R\% = \frac{72}{T}$$

Or, $T = \frac{72}{R\%}$

નેરેસ્ટ

2. 69 rule :-

$$T = \frac{69}{R\%} + 0.37$$

Triple Money

1. **114 rule :-**

$$R\% = \frac{114}{T}$$

Or

$$T = \frac{114}{R\%}$$

Note:

1. Four times के लिए double money वाला concept

$$T = \frac{72}{8\%}$$

$$\frac{72}{30} \rightarrow \frac{72}{3 \times 10} \Rightarrow \boxed{2.4}$$

1. In how many years will Rs. 100 will double itself at 30% per annum compound interest?

30% वार्षिक चक्रवृद्धि ब्याज की दर पर 100 रुपये कितने वर्षों में (दोगुना) हो जाएंगे?

2.5

(b) 1.5

(c) 3

(d) 4

2. In how many years will Rs. 1700 will double itself at 4% per annum compound interest?

4% वार्षिक चक्रवृद्धि ब्याज की दर पर 1700 रुपये कितने वर्षों में दोगुना हो जाएंगे?

$$\frac{7\frac{9}{10}}{4} = 18 \text{ লেগিস্টার}$$

#

$$\frac{69}{4} + 0.37$$

17.25 + 0.37

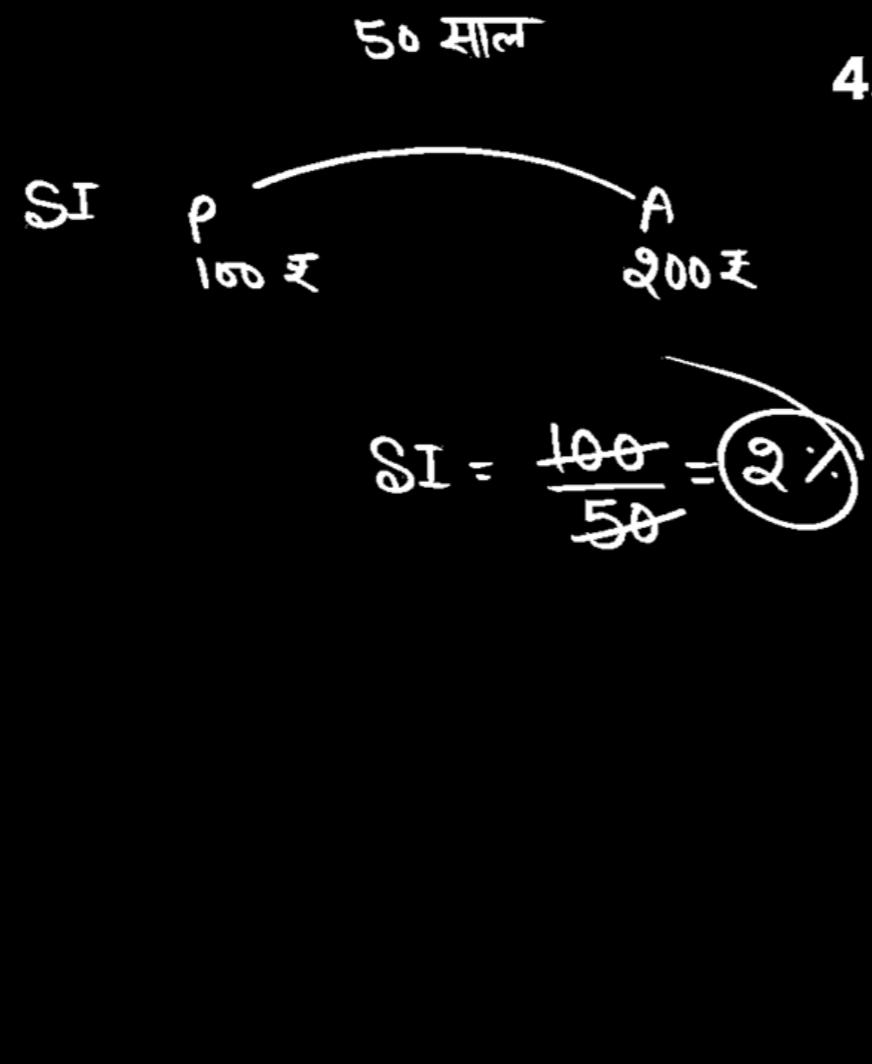
17.69 / 1

72
+2

3. If the interest rate per annum is 12% which is compounded annually, in what time Rs. 2400 will double itself?

यदि ब्याज दर प्रति वर्ष 12% है जो वार्षिक रूप से संयोजित है, तो 2400 रुपये कितने समय में द्वयं का दोगुना हो जाएगा?

- (a) 8 years (b) 6 years
(c) 12 years (d) 10 years



4. A sum of money doubles itself in 50 years at a certain rate percent of simple interest. How long will it take to double itself at the same rate of compound interest?

एक धनराशि साधारण ब्याज की एक निश्चित प्रतिशत दर से 50 वर्ष में दुगनी हो जाती है। चक्रवृद्धि ब्याज की समान दर से स्वयं को दोगुना करने में कितना समय लगेगा?

- | | |
|--------------|--------------|
| (a) 25 years | (b) 27 years |
| (c) 35 years | (d) 37 years |

$$r = 2\% \rightarrow CI$$

$$\begin{array}{r} 61 \\ \times 2 \\ \hline 122 \\ + 0.37 \\ \hline 34.53 \\ \hline 34.8 \end{array}$$

4. A sum of money doubles itself in 50 years at a certain rate percent of simple interest. How long will it take to double itself at the same rate of compound interest?

एक धनराशि साधारण ब्याज की एक निश्चित प्रतिशत दर से 50 वर्ष में दुगनी हो जाती है। चक्रवृद्धि ब्याज की समान दर से स्वयं को दोगुना करने में कितना समय लगेगा?

(a) 25 years

(b) 27 years

~~(c)~~ 35 years

~~(d)~~ 37 years

5. The minimum time in which some amount will become thrice of itself at 25% rate of compound interest:

$$\frac{100}{25} = 4.$$

वह न्यूनतम समय जिसमें कुछ राशि चक्रवृद्धि ब्याज की 25% दर पर स्वयं की तीन गुनी हो जाएगी:

- (a) 3 years
- (b) 6 years
- (c) 7 years
- (d) ✓ 5 years

$$T = \frac{114}{R}$$

$$\frac{114}{19} = 6\%$$

6. Rs.450 is invested today, it will become Rs.1350 in 19 years. What is the compound interest rate?

आज 450 रुपये का निवेश, 19 साल में 1350³
रुपये हो जाएगा। चक्रवृद्धि ब्याज दर क्या है?
 (a) 6% (b) 7% (c) 8% (d) 9%

Double.

$$T = \frac{69}{6} + 0.37$$

$$\Rightarrow 11.5 + 0.4 \Rightarrow 11.9$$

1 \longrightarrow 11.9 साल
2
 $4 \rightarrow 2^{2 \times 11.9} = 23.8$

6. In how many years a sum will become 4 times of itself on compound interest at 6% per annum compounded annually?

कितने वर्षों में एक राशि 6% वार्षिक चक्रवृद्धि ब्याज पर स्वयं का गुना हो जाएगी?

- (a) 20 ~~(b)~~ 24 (c) 26 (d) 12

Double

$$T = \frac{600}{9} + 0.37 \\ = 7.6 + 0.4 = 8$$

$$\begin{array}{r} 9 \longrightarrow 8 \\ 4 \rightarrow 2 \\ \textcircled{2 \times 8} \end{array}$$

8. Rs.600 is invested today, it will become Rs.2400 at 9% per annum. In how many years this can happen?

आज 600 रु. का निवेश करने पर यह 9% प्रति वर्ष ब्याज की दर पर 2400 रुपये कितने वर्षों में हो जाएगा।

- (a) 12 (b) 15 (c) 16 (d) 18