



CGGL CHSL 2021

MATHS

60 दिन 60 मैराथन

08:30 PM

COMPOUND INTEREST

चक्रवृद्धि ब्याज - 02



**2
60**

Target 50/50

**ADITYA RANJAN
CGL TOPPER**

हर दिन एक नए **POST** की पूरी जानकारी

- **Salary**
- **Power**
- **Qualification**
- **Age**
- **Posting**



अपनी मंज़िल को भुला कर जिया तो क्या जिया
है दम तुझमे तो उसे पा के दिखा
लिखे दे खून से अपने कामयाबी की कहानी
और बोल उस किस्मत को है दम तो मिटा के दिखा



S No	Name of Post	Ministry/ Department/ Office/ Cadre	Classification of Posts	Age Limit
1	Assistant Audit Officer	Indian Audit & Accounts Department under C&AG	Group "B" Gazetted	18-30 years
2	Assistant Accounts Officer	Indian Audit & Accounts Department under C&AG	Group "B" Gazetted	18-30 years
3	Assistant Section Officer	Central Secretariat Service	Group "B"	20-30 years
4	Assistant Section Officer	Intelligence Bureau	Group "B"	18-30 years
5	Assistant Section Officer	Ministry of Railway	Group "B"	20-30 years
6	Assistant Section Officer	Ministry of External Affairs	Group "B"	20-30 years
7	Assistant Section Officer	AFHQ	Group "B"	20-30 years
8	Assistant Section Officer	Ministry of Electronics and Information Technology	Group "B"	18-30 years
9	Assistant	Other Ministries/ Departments/ Organizations	Group "B"	20-30 years
10	Assistant Section Officer	Other Ministries/ Departments/ Organizations	Group "B"	18-30 years

**New
Post**

11	Inspector of Income Tax	CBDT	Group "C"	18-30 years
12	Inspector, (CGST & Central Excise)	CBIC	Group "B"	18-30 years
13	Inspector (Preventive Officer)	CBIC	Group "B"	18-30 years
14	Inspector (Examiner)	CBIC	Group "B"	18-30 years
15	Assistant Enforcement Officer	Directorate of Enforcement, Department of Revenue	Group "B"	18-30 years
16	Sub Inspector	Central Bureau of Investigation	Group "B"	20-30 years
17	Inspector Posts	Department of Post	Group "B"	18-30 years
18	Inspector	Central Bureau of Narcotics	Group "B"	18-30 years
19	Assistant/ Superintendent	Indian Coast Guard	Group "B"	18-30 years
20	Assistant	Other Ministries/ Departments/ Organizations	Group "B"	18-30 years
21	Assistant	National Company Law Appellate Tribunal (NCLAT)	Group "B"	18-30 years
22	Research Assistant	National Human Rights Commission (NHRC)	Group "B"	18-30 years

23	Divisional Accountant	Offices under C&AG	Group “B”	18-30 years
24	Sub Inspector	National Investigation Agency (NIA)	Group “B”	18-30 years
25	Junior Statistical Officer (JSO)	M/o Statistics & Programme Implementation.	Group “B”	18-32 years
26	Statistical Investigator Grade-II	Registrar General of India	Group “B”	18-30 years

27	Auditor	Offices under C&AG	Group “C”	18-27 years
28	Auditor	Other Ministry/ Departments	Group “C”	18-27 years
29	Auditor	Offices under CGDA	Group “C”	18-27 years
30	Accountant	Offices under C&AG	Group “C”	18-27 years
31	Accountant/ Junior Accountant	Other Ministry/ Departments	Group “C”	18-27 years
32	Senior Secretariat Assistant/ Upper Division Clerks	Ministry of Electronics and Information Technology	Group “C”	18-27 years
33	Senior Secretariat Assistant/ Upper Division Clerks	Central Govt. Offices/ Ministries other than CSCS cadres.	Group “C”	18-27 years
34	Tax Assistant	CBDT	Group “C”	18-27 years
35	Tax Assistant	CBIC	Group “C”	18-27 years
36	Sub-Inspector	Central Bureau of Narcotics	Group “C”	18-27 years

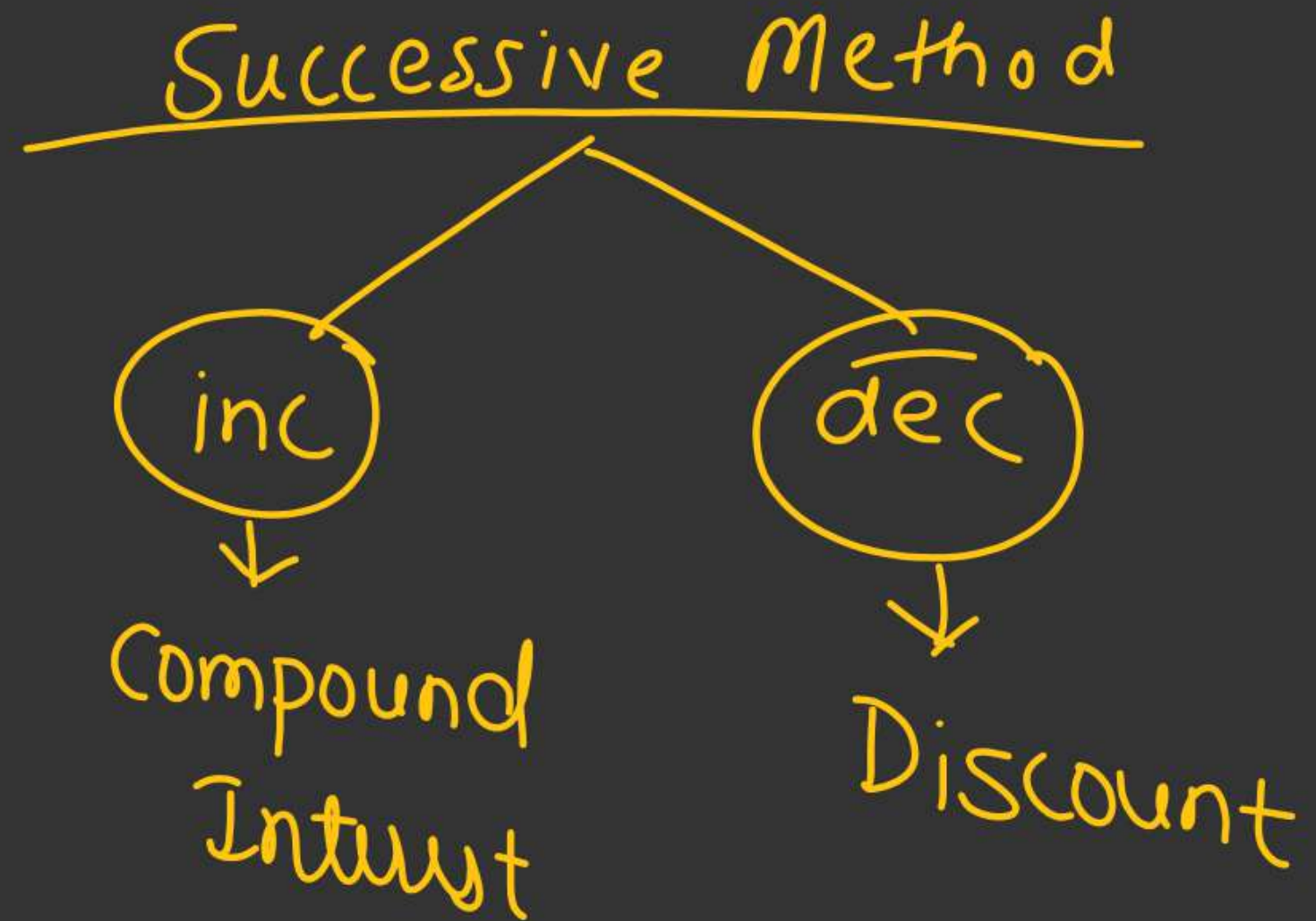
The background of the image consists of several Indian 500 rupee banknotes. The notes are yellowish-tan with a portrait of Mahatma Gandhi on the left side. The text 'RESERVE BANK OF INDIA' and 'पाँच सौ रुपये' (Five Hundred Rupees) are visible. Serial numbers like '2EF 318178', '9385', '782233', '064', '084227', and '712365' are printed on the notes. The word '₹500' is printed in large blue and green digits. A black rounded rectangle is superimposed over the center of the image, containing the title text.

Concept Of Successive Method

rate \rightarrow 1%, 2%, 3% - - -

" \rightarrow $16\frac{2}{3}\%$, $11\frac{1}{9}\%$, $12\frac{1}{2}\%$ -

Ratio



$$P = 1000$$

$$r = 3\%$$

$$T = 2$$

$$CI = ?$$

$$2Y$$

$$CI = a + b + \frac{ab}{100}$$

$$P = 1000$$

$$r = 3\%$$

$$T = 2$$

$$CI = ?$$

2Y

$$CI = a + b + \frac{ab}{100}$$
$$= 3 + 3 + \frac{3 \times 3}{100}$$

$$= 6 + \frac{9}{100}$$

$$= 6 + 0.09 = 6.09\%$$

1Sec

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

$$= \underline{\underline{60.9}}$$

Successive

$$\text{If } a=b$$

$$a+b+\frac{ab}{100}$$

$$2a \cdot a^2$$

Compound Interest

2% 2% → 4.04%

3% 3% → 6.09%

4% 4% → 8.16%

7% 7% → 14.49%

9% 9% → 18.81%

13% 13% → 26.169%
27.69%

11%

11%

→ 22.12%

23.21%

12%

12%

→ 24.144%

25.44%

21%

21%

→ 42.441%

46.41%

6% 6% → 12.36%
 ↓
 CI

$\frac{280900}{112.36} \times 100 \times 100$
 $\frac{1 \times 7}{4 \times 7} = 7$

A certain sum amounts to ₹ 280900 in 2 years at 6% per annum, interest compounded annually. The sum is :

एक निश्चित राशि 6 प्रतिशत प्रति वर्ष वार्षिक संयोजन की दर से 2 वर्षों में ₹ 280900 हो जाती है। यह राशि कितनी है?

SSC CGL 9 March 2020 (Afternoon)

(a) ₹ 350000

(b) ₹ 200000

(c) ₹ 250000

(d) ₹ 550000

$$\frac{280900 \times 100\%}{112.36\%}$$

$$\frac{1 \times 7}{4 \times 7} = 7$$

A certain sum amounts to ₹ 280900 in 2 years at 6% per annum, interest compounded annually. The sum is :

एक निश्चित राशि 6 प्रतिशत प्रति वर्ष वार्षिक संयोजन की दर से 2 वर्षों में ₹ 280900 हो जाती है। यह राशि कितनी है?

SSC CGL 9 March 2020 (Afternoon)

(a) ₹ 350000

(b) ₹ 200000

✓ (c) ₹ 250000

(d) ₹ 550000

$$P = 1000 \quad r = 6\% \quad T = 2$$

$$A = ?$$

$$6\% \quad 6\% \quad (I \rightarrow 12.36\%)$$

$$\frac{1000}{100} \times 112.36$$

$$= 1123.6$$

Ram deposited an amount of ₹ 1,000 in a bank's savings account with interest 6% compounded monthly. What amount will he get at the end of 24 months? 2 साल

राम ने बैंक के बचत खाते में ₹ 1000 की राशि जमा की जिस पर मासिक संयोजन के अनुसार 6% ब्याज मिलता है। 24 माह के अंत में उसे कितना मिश्रधन प्राप्त होगा?

SSC CHSL 17/03/2020 (Evening)

(a) ₹ 1123.6

(b) ₹ 788.98

(c) ₹ 1246.12

(d) ₹ 807.56

$$A = 24494.4 \quad r = 8\% \quad T = 2$$

$$CI = 16.64\%$$

$$P = 100\%$$

$$A = 116.64\%$$

$$\frac{24494.4}{116.64} \times 100 \times 104$$

$$\underline{21000}$$

If the compound interest is compounded annually, then what sum will become ₹ 24494.40 in 2 years at the rate of 8% compound interest?

यदि चक्रवृद्धि ब्याज वार्षिक रूप से संयोजित किया जाता है, तो 8% वार्षिक चक्रवृद्धि ब्याज की दर से कितनी राशि 2 वर्ष में ₹ 24494.40 हो जाएगी?

SSC MTS 2019

(a) ₹ 21200

(b) ₹ 22400

☒ (c) ₹ 21000

(d) ₹ 22000

$$r = 12\% \quad T = 2 \quad CI = 477$$

$$CI = 24.144$$

$$= 25.44\%$$

$$\frac{477}{100} \times \frac{100}{100} \times \frac{100}{100}$$

$$= 477$$

$$636$$

$$159$$

$$= 625 \times 3$$

$$= 1875$$

The compound interest for two years at 12% per annum is ₹ 477. What is the principal amount (in ₹) invested?

12% प्रति वर्ष की दर से दो वर्षों का चक्रवृद्धि ब्याज ₹ 477 है। निवेश किया गया मूल धन (₹ में) ज्ञात करें।

SSC MTS 9 August 2019 (Morning)

(a) 1875

(b) 1500

(c) 2000

(d) 1650

$$r = 11\% \quad T = 2 \quad CI = 6963$$

$$SI = ?$$

$$CI = 23.21\%$$

$$SI = rt = 11 \times 2 = 22\%$$

$$\frac{6963 \times 22 \times 100}{100} = 6600$$

The compound interest on a certain sum of money at 11% for 2 years is ₹ 6963. Its simple interest (in ₹) at the same rate and for the same period is :

किसी निश्चित राशि पर 11% की दर से 2 वर्ष का चक्रवृद्धि ब्याज ₹ 6963 है। समान दर से समान अवधि के लिए इसका साधारण ब्याज कितना होगा?

SSC CHSL 8 July 2019 (Afternoon)

(a) ₹ 6500

(b) ₹ 6600

(c) ₹ 6750

(d) ₹ 6000

$$r = 21\% \quad T = 2 \quad CI = 9282$$
$$SI = ?$$

$$CI = 46.41\%$$

$$SI = rt = \frac{21 \times 2}{2} = 42\%$$

$$\frac{9282 \times 42 \times 100}{4641}$$

$$8400$$

The compound interest on a certain sum of money at 21% for 2 years is ₹ 9,282. Its simple interest (in ₹) at the same rate and for the same period is :

किसी निश्चित राशि पर 21% की दर से 2 वर्ष का चक्रवृद्धि ब्याज 9282 रुपये है। समान दर से समान अवधि के लिए इसका साधारण ब्याज ज्ञात करें।

SSC CHSL 8 July 2019 (Evening)

(a) ₹ 8750

✓ (b) ₹ 8400

(c) ₹ 8000

(d) ₹ 8500

$$r = 21\% \quad T = 2 \quad CI = 6961.5$$

$$SI = ?$$

$$CI = 46.41\%$$

$$SI = 42\%$$

$$\frac{6961.5 \times 42 \times 100}{100 \times 100} = 6300$$

The compound interest on a certain sum of money at 21% for 2 years is ₹ 6,961.5. Its simple interest (in ₹) at the same rate and for the same period is :

किसी निश्चित राशि पर 21% की दर से 2 वर्ष का चक्रवृद्धि ब्याज ₹ 6961.5 है। समान दर से तथा समान अवधि के लिए इसका साधारण ब्याज ज्ञात करें।

SSC CHSL 9 June 2019 (Morning)

(a) ₹ 6300

(b) ₹ 6500

(c) ₹ 6000

(d) ₹ 6750

$$P=1200 \quad T=2 \quad r=20\%$$

$$CI=?$$

$$CI=44\%$$

$$\frac{1200 \times 44\%}{100\%}$$

$$= 528$$

What will be the compound interest on a sum of ₹ 1200 for 2 years at the rate of 20% per annum when the interest is compounded yearly?

₹ 1200 पर 20% प्रति वर्ष की दर से 2 वर्ष का चक्रवृद्धि ब्याज ज्ञात करें जब ब्याज की चक्रवृद्धि वार्षिक है?

SSC MTS 2 August 2019 (Afternoon)

(a) ₹ 624

(b) ₹ 504

(c) ₹ 576

(d) ₹ 528

Any
Comment
Box

The compound interest on a certain sum of money at 21% for 2 years is ₹ 11,602.5. Its simple interest (in ₹) at the same rate and for the same period is :

किसी निश्चित राशि पर 21% की दर से 2 वर्षों का चक्रवृद्धि ब्याज ₹ 11,602.5 है। इस दर से इसी अवधि के लिए इसका साधारण ब्याज (₹ में) ज्ञात करें।

SSC CHSL 9 July 2019 (Afternoon)

(a) ₹ 10,750

(b) ₹ 16,000

(c) ₹ 12,500

(d) ₹ 10,500

$$r = 5\% \quad T = 2 \quad CI = 328$$

$$CI = 10.25\%$$

$$\begin{array}{r} 8 \quad 20 \\ \hline 328 \times 100\% \times 100 \\ \hline 10.25\% \\ 205 \\ \hline 41 \end{array}$$

$$3200$$

If the compound interest on a certain sum of money for 2 years at 5% p.a. is ₹ 328, then the sum is equal to :

यदि 2 वर्ष के लिए 5% प्रतिवर्ष की दर से एक राशि पर चक्रवृद्धि ब्याज ₹ 328 है, तो राशि ज्ञात करें।

SSC CHSL 26/10/2020 (Morning)

(a) ₹ 3600

(b) ₹ 3500

(c) ₹ 3000

(d) ₹ 3,200

Some more
Conceptual and
Latest Questions

$$r = 10\%$$

$$T = 18 \text{ months}$$

$$R = \frac{10\% \times 6}{12 \text{ month} \times 2}$$

$$R = 5\%$$

$$5\% = \left(\frac{1}{20}\right)$$

$$T = \frac{18 \text{ month}}{6 \text{ month}} = 3$$

$$\begin{array}{cc} \textcircled{P} & \textcircled{A} \\ 20^3 : 21^3 \\ \hline 8000 : 9261 \end{array}$$

$$\frac{\text{₹ } 1200}{8000} \times 9261 \times 5$$

$$20 \times 5$$

$$= 1389.15$$

A sum of ₹ 1200 is invested at compound interest (compounded half yearly). If the rate of interest is 10% per annum, then what will be the amount after 18 months?

₹ 1200 की राशि चक्रवृद्धि ब्याज (अर्धवार्षिक रूप से संयोजित) पर निवेश की गयी है। यदि ब्याज की दर 10% प्रति वर्ष है, तो 18 माह के बाद मिश्रधन कितना होगा?

SSC MTS 2019

- (a) ₹ 1389.15
(c) ₹ 1563.25

- (b) ₹ 1185.45
(d) ₹ 1295.35

$$r = 10\% \quad T = 18 \text{ months}$$

$$R = \frac{10\% \times 6}{12 \text{ month} \times 2} \quad T = \frac{18 \text{ month}}{6 \text{ month}} = 3$$

$$R = 5\% \quad T = 3 \quad CI = 15.7625\%$$

$$\frac{1200 \times 115.7625\%}{100\%}$$

A sum of ₹ 1200 is invested at compound interest (compounded half yearly). If the rate of interest is 10% per annum, then what will be the amount after 18 months?

₹ 1200 की राशि चक्रवृद्धि ब्याज (अर्धवार्षिक रूप से संयोजित) पर निवेश की गयी है। यदि ब्याज की दर 10% प्रति वर्ष है, तो 18 माह के बाद मिश्रधन कितना होगा?

SSC MTS 2019

(a) ₹ 1389.15

(b) ₹ 1185.45

(c) ₹ 1563.25

(d) ₹ 1295.35

The compound interest on a certain sum at 15% p.a. compounded yearly for $2\frac{1}{3}$ years is ₹ 9327. The sum is :

किसी निश्चित राशि पर 15% प्रति वर्ष की दर से $2\frac{1}{3}$ वर्षों का चक्रवृद्धि ब्याज (वार्षिक रूप से संयोजित) ₹ 9327 है। यह राशि है :

SSC MTS 22 August 2019 (Morning)

(a) ₹ 24000

(b) ₹ 25000

(c) ₹ 20000

(d) ₹ 27000

$$r = 15\% \quad T = 24 \text{ month}$$

$$R = \frac{15 \times 8}{12} = 10\% \quad T = \frac{24}{8} = 3$$

$$R = 10\% \quad T = 3$$

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

$$\begin{array}{l} \textcircled{P} : \textcircled{A} \\ 10^3 : 11^3 \\ \hline 1000 : 1331 \end{array}$$

$$\frac{5500 \times 331}{1000}$$

The compound interest on a sum of Rs. 5,500 at 15% p.a. for 2 years, when the interest compounded 8 monthly is:

₹ 5,500 की राशि पर वार्षिक 15% की दर से 2 वर्ष में प्राप्त चक्रवृद्धि ब्याज ज्ञात कीजिए, जब ब्याज की गणना हर 8 महीने पर चक्रवृद्धि आधार पर की जाती है।

SSC CGL T-2 2019

(a) ₹ 1880

(b) ₹ 1,820.50

(c) ₹ 1,773.75

(d) ₹ 1,850

$$r = 15\%$$

$$t = 30 \text{ months}$$

$$R = \frac{15}{12} \times \frac{5}{42}$$

$$T = \frac{30}{10} = 3$$

$$R = 12.5\%$$

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

$$\begin{array}{cc} \textcircled{P} & \textcircled{A} \\ 8^3 & : \quad 9^3 \\ \hline 512 & : 729 \\ & \textcircled{217} \end{array}$$

$$\frac{4096 \times 217}{512} = 1736$$

What is the compound interest on a sum of ₹ 4,096 at 15% p.a. for $2\frac{1}{2}$ years, if the interest is compounded 10-monthly?

₹ 4,096 पर 15% प्रति वर्ष की दर से $2\frac{1}{2}$ वर्ष का चक्रवृद्धि ब्याज ज्ञात करें यदि ब्याज की चक्रवृद्धि 10 माह की है।

SSC CHSL 2 July 2019 (Evening)

(a) ₹ 1,726

☒ (b) ₹ 1,736

(c) ₹ 1,636

(d) ₹ 1,763

The compound interest on a certain sum at 15% p.a. compounded yearly for $2\frac{1}{3}$ years is ₹ 9327. The sum is :

किसी निश्चित राशि पर 15% प्रति वर्ष की दर से $2\frac{1}{3}$ वर्षों का चक्रवृद्धि ब्याज (वार्षिक रूप से संयोजित) ₹ 9327 है। यह राशि है :

SSC MTS 22 August 2019 (Morning)

(a) ₹ 24000

(b) ₹ 25000

(c) ₹ 20000

(d) ₹ 27000

Calculate the compound interest on ₹ 15,625 for 2 years at the rate of 12% p.a., if the interest is compounded 8-monthly?

12% वार्षिक दर से 2 वर्षों के लिए ₹ 15,625 की राशि पर चक्रवृद्धि ब्याज कितना है, यदि ब्याज को 8-माह पर संयोजित किया जाता है?

SSC MTS 22 August 2019 (Afternoon)

(a) ₹ 3075

(b) ₹ 4058

(c) ₹ 3675

(d) ₹ 4088

What will be the compound interest on a sum of ₹ 31,250 at 12% compound interest (interest compounded yearly) in $2\frac{2}{3}$ years?

₹ 31,250 की एक राशि पर 12% की दर से $2\frac{2}{3}$ वर्ष का चक्रवृद्धि ब्याज (वार्षिक रूप से संयोजित) कितना होगा?

SSC MTS 19 August 2019 (Evening)

(a) ₹ 11,048

(b) ₹ 11,096

(c) ₹ 11,068

(d) ₹ 11,086

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