

MATHS SPECIAL



PRE + MAINS

LIVE CLASS (ONE TO ONE INTERACTION)

**REGISTRATION
OPEN**

BILINGUAL CONTENT

INCLUDES

- ☐ LIVE Classes
- ☐ Result Oriented Approach
- ☐ PDF Notes
- ☐ Conceptual Clarity

1 YEAR VALIDITY

USEFUL FOR

- ☐ SSC EXAMS
- ☐ BANK EXAMS
- ☐ CSAT
- ☐ STATE GOVT. EXAMS

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SACHIN BALIYAN SIR

MATHS SYLLABUS



ARITHMETIC:

(SSC/BANK/CUET/CSAT/STATE GOVT)

Time and Work
Pipe and Cistern

Percentage
Profit Loss and Discount
Compound Interest
Simple Interest

Average
Ratio and Proportion
Based of Ages
Partnership
Mixture and Alligation

Time Speed And Distance
Train
Race
Boat and Stream

BANK:

Number Series
Quadratic Equation
Simplification
Approximation

Data Interpretation

Mensuration

Permutation
Combination
Probability

SSC:

Number System
LCM + HCF

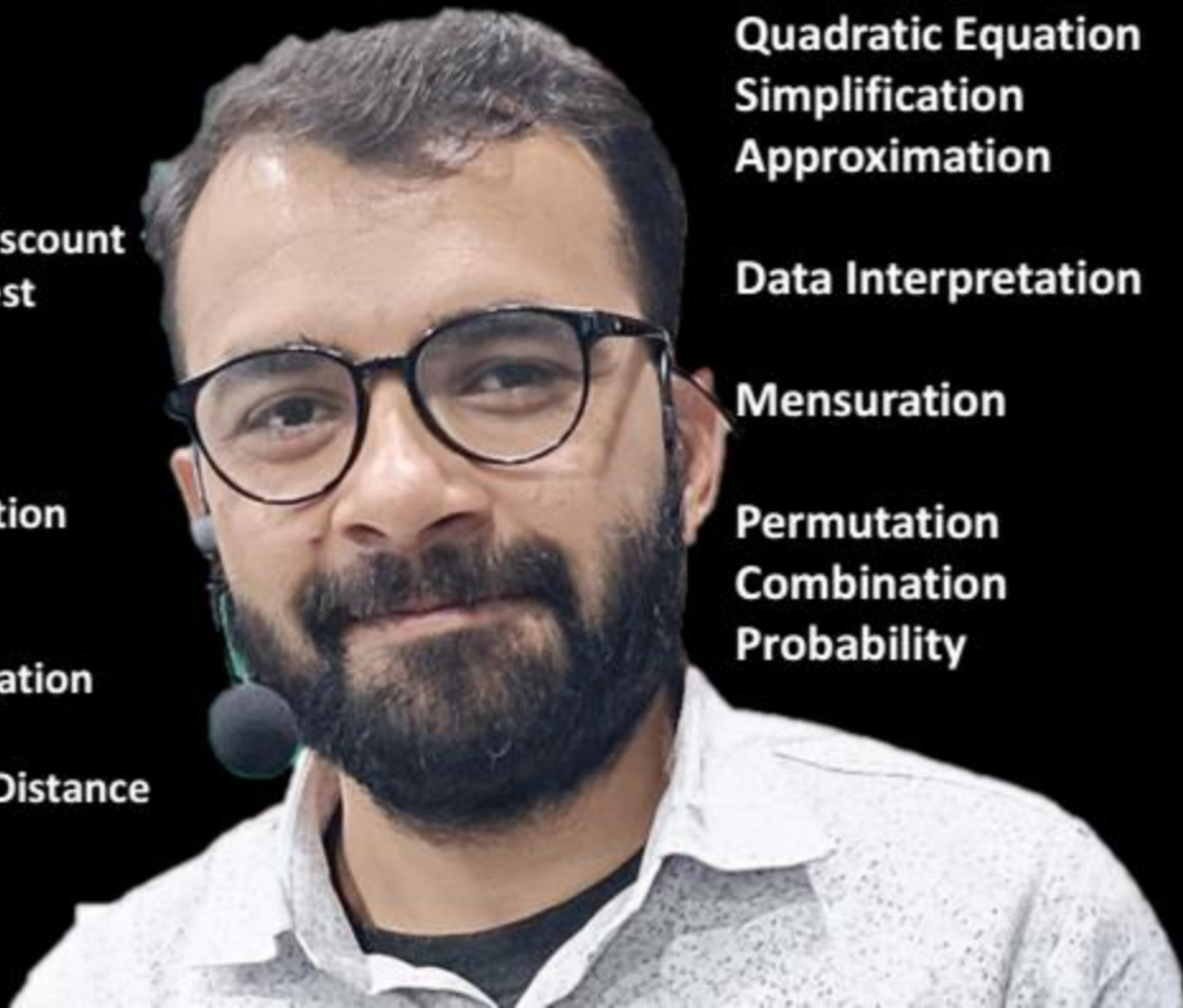
Surds
Indices
Algebra

Trigonometry
Height and Distance

Geometry

Mensuration-2D
Mensuration-3D

Co-ordinate Geometry



COMPOUND INTEREST

R/T/Inst

use

① successive method

② line method

③ Compound charge

Compound Change

NO. OF QUESTIONS	CLASS NUMBER	CLASS DURATION
15 Questions	DAY - 3	1 HOURS

10 = 3 months

8%

12 months
6 months

Compound Change - Annually , Half-Yearly & Quarterly Compound

3 months

8%

1500

11000

10500

5%

$$R = 10\% \text{ (PA)} \rightarrow \text{int (1\%)} \\ \frac{1}{10} \rightarrow P$$

Compounded
Annually ✓

$$R = 5\% \text{ (PH)} \rightarrow \text{int (6 months)} \\ \frac{1}{20} \rightarrow P$$

Compounded
Semi-Annually
or
Half yearly

$$R = 20\% \cdot \textcircled{PQ}$$

$\frac{1}{5} \rightarrow \text{int}(\underline{10 \text{ or } 3 \text{ months}})$
 $\frac{1}{5} \rightarrow P$

Compounded
Quarterly

4 month

$P \rightarrow \frac{1}{5}$

Compounded
4 monthly

$$R = 20\% \cdot \boxed{PA}$$

141m

$\frac{1}{5} \rightarrow P$

$$\frac{1}{5} \times \frac{1}{12} \times 4$$

CI – 3 (Compound Change)

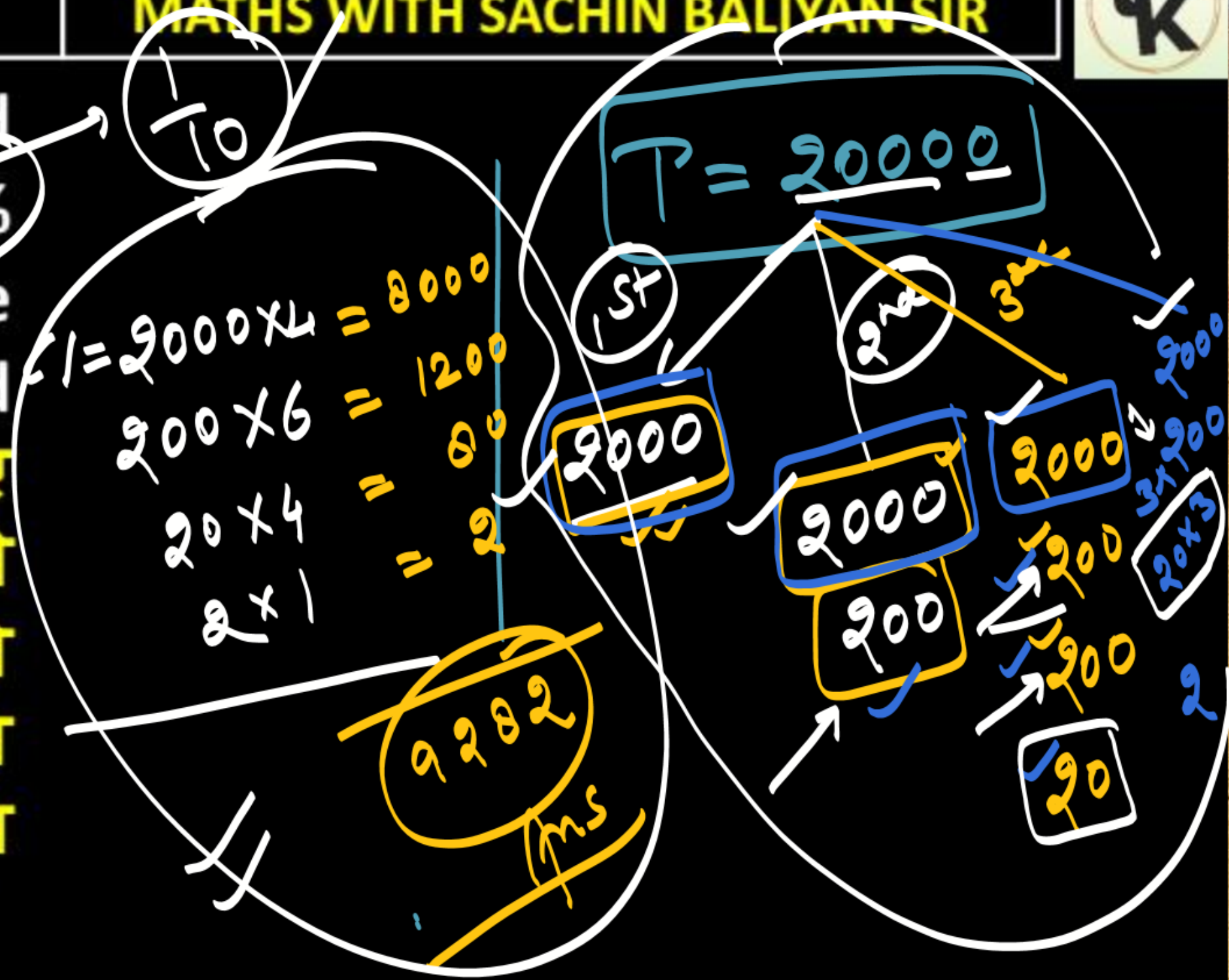
MATHS WITH SACHIN BALIYAN SIR

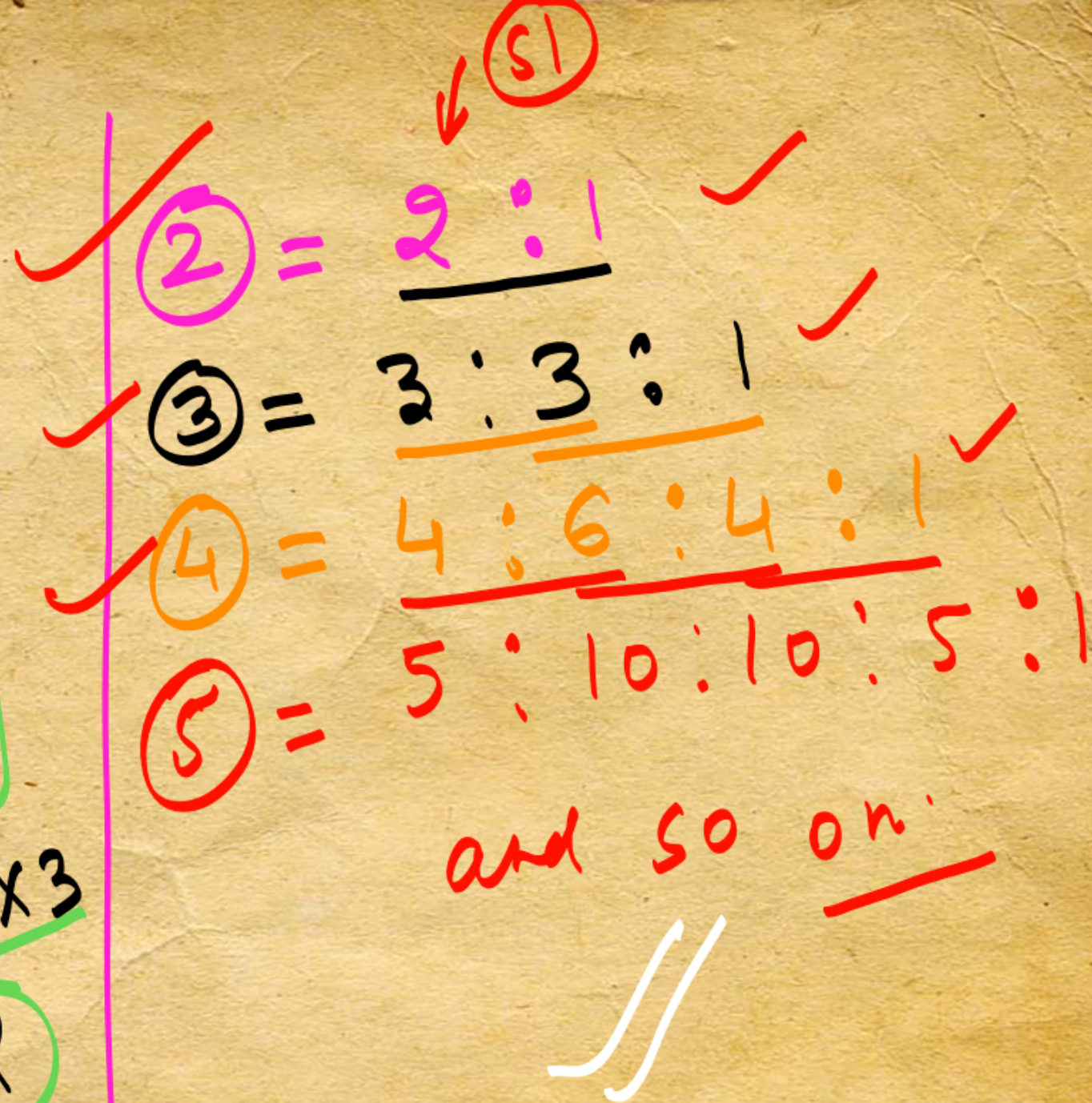




What is the compound interest on Rs. 20000 at 20% per annum for 2 years, while interest being compounded semi-annually? 2 वर्ष के लिए 20% प्रति वर्ष की दर से 20000 रुपये पर चक्रवृद्धि ब्याज क्या है। जबकि ब्याज अर्ध-वार्षिक रूप से संयोजित किया जा रहा है?

- A) Rs 3200 B) Rs 36000
C) Rs 6000 D) None of these





$$P = 20000$$

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

$$T = 444$$

$$4 : (6) 4 : 1$$

$$(S) = 2000 \times 4$$

$$\cancel{(S)} (2)$$

(3)

\downarrow
C1-S1

1200
900
200

1282

$$\begin{array}{r} 200 \times 6 \\ 20 \times 4 \\ 2 \times 1 \end{array}$$

$$C1 = 8000$$

(1)

1200
800
2
9282



What is the compound interest on Rs. 80000 at 20% per annum for 2 years, while interest being compounded semi-annually? 2 वर्ष के लिए 20% प्रति वर्ष की दर से 80000 रुपये पर चक्रवृद्धि ब्याज क्या है। जबकि ब्याज अर्ध-वार्षिक रूप से संयोजित किया जा रहा है?

A) Rs 35128

✓ B) Rs 37128

C) Rs 97802

D) Rs 37810

$$10 \times \frac{20}{100}$$

444

$$4:6:4:1$$

$$P = 80000$$

$$SI = 8000 \times 4$$

$$32000$$

$$48000$$

$$3208$$

$$800 \times 6$$

$$4800$$

$$80 \times 4$$

$$320$$

$$8 \times 1$$

$$37128$$



Find the compound interest on Rs. 16,000 at 20 % per annum for 9 months, compounded quarterly?

16,000 रुपये पर 9 महीनों के लिए 20% प्रति वर्ष पर चक्रवृद्धि ब्याज का पता लगाए। जब ब्याज त्रैमासिक संयोजित होता है?

A) 2422

B) 2522

C) 2622

D) 2722

5% PA

$\frac{1}{20}$

$T = 30$

3:3:1

$P = 16000$

$$SI = \left\{ \begin{array}{l} 800 \times 3 \\ 40 \times 3 \\ 2 \times 1 \end{array} \right.$$

$$\frac{2400}{120} \times 2$$

A) 2422

C) 2622

B) 2522
D) 2722

Handwritten notes and calculations:

- $\frac{10 \times 4 \times 1}{12 \times 3}$ (with $\frac{10}{10}$ crossed out)
- $\frac{1}{30}$ (circled)
- $T = 3 \text{ Term}$ (boxed)
- $3:3:1$
- $P = 20000$ (boxed)
- $\frac{20000}{66.6} = 300.0$ (with 512 written next to it)
- $\frac{20000}{3} = 6666.6$ (boxed)
- $\frac{20000}{9} = 2222.2$ (circled)
- $\frac{20000}{27} = 740.7$ (circled)



A sum of money lent at compound interest for 2 years at 20% per annum would fetch Rs 482 more interest if the interest will be payable half yearly instead of it was payable annually . The sum is? एक राशि को 2 वर्ष के लिए 20% प्रति वर्ष की दर से चक्रवृद्धि ब्याज पर उधार दी गई राशि पर 482 रुपये अधिक ब्याज मिलेगा यदि ब्याज वार्षिक देय होने के बजाय अर्धवार्षिक रूप से देय होगा। उधार ली गई धनराशि ज्ञात कीजिए?

- A) 10000
C) 40000

- B) 20000
D) 50000

$$R = 20\% \cdot \boxed{PA}$$

$$T = \boxed{2 \text{ year}}$$

$\left(\frac{1}{5}\right)$

$$2:1$$

$$20K$$

$$R = 10\% \cdot \boxed{PH}$$

$$T = \boxed{4 \text{ year}}$$

$\left(\frac{1}{10}\right)$

$$4:6:4:1$$

\textcircled{H}

\textcircled{A}

mp

$$P = 10 \times 10 \times 10 \times 10$$

$$SI = \left. \begin{array}{l} 2000 \times 2 \\ 400 \times 1 \end{array} \right\}$$

$$CI = 4400$$

$$SI = \left. \begin{array}{l} 1000 \times 4 \\ 100 \times 6 \\ 10 \times 4 \\ 1 \times 1 \end{array} \right\}$$

$$CI = 4641$$

$$\cancel{241} \Rightarrow \cancel{482} \text{ RS}$$

$$2 \text{ RS}$$



Find the C.I. on Rs 15,000 for 2 years at 15% per annum compound interest while interest being compounded at the end of each 8 months ?

15,000 रुपये पर 2 साल के लिए 15% प्रति वर्ष चक्रवृद्धि ब्याज पर चक्रवृद्धि ब्याज ज्ञात करें जबकि ब्याज प्रत्येक 8 महीने के अंत में चक्रवृद्धि हो रहा है?

- A) Rs. 4915
C) Rs. 5901

- B) Rs. 4965
D) Rs. 6907

H.W

3 terms
3:3:1

5
15 x 2
12
10.1

