

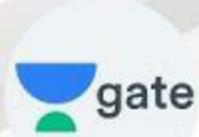
GATE 2021

GENERAL APTITUDE

धमाकेदार ट्रिक के साथ 🔥🔥

**RATIO AND
PROPORTION -5**

17



 unacademy

AVINASH SIR

AVINASH SINGH SIR

GATE | EE (CE)



Secured Score 99.86% in
CAT (Quantitative Section)



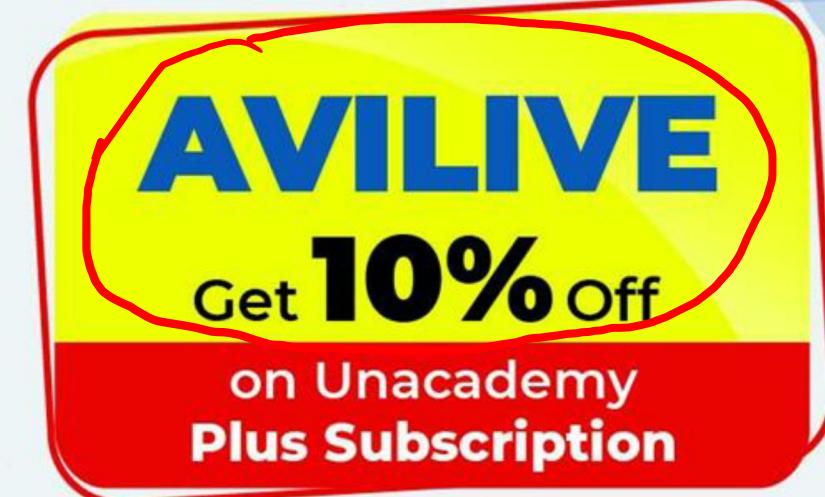
GATE/ESE:

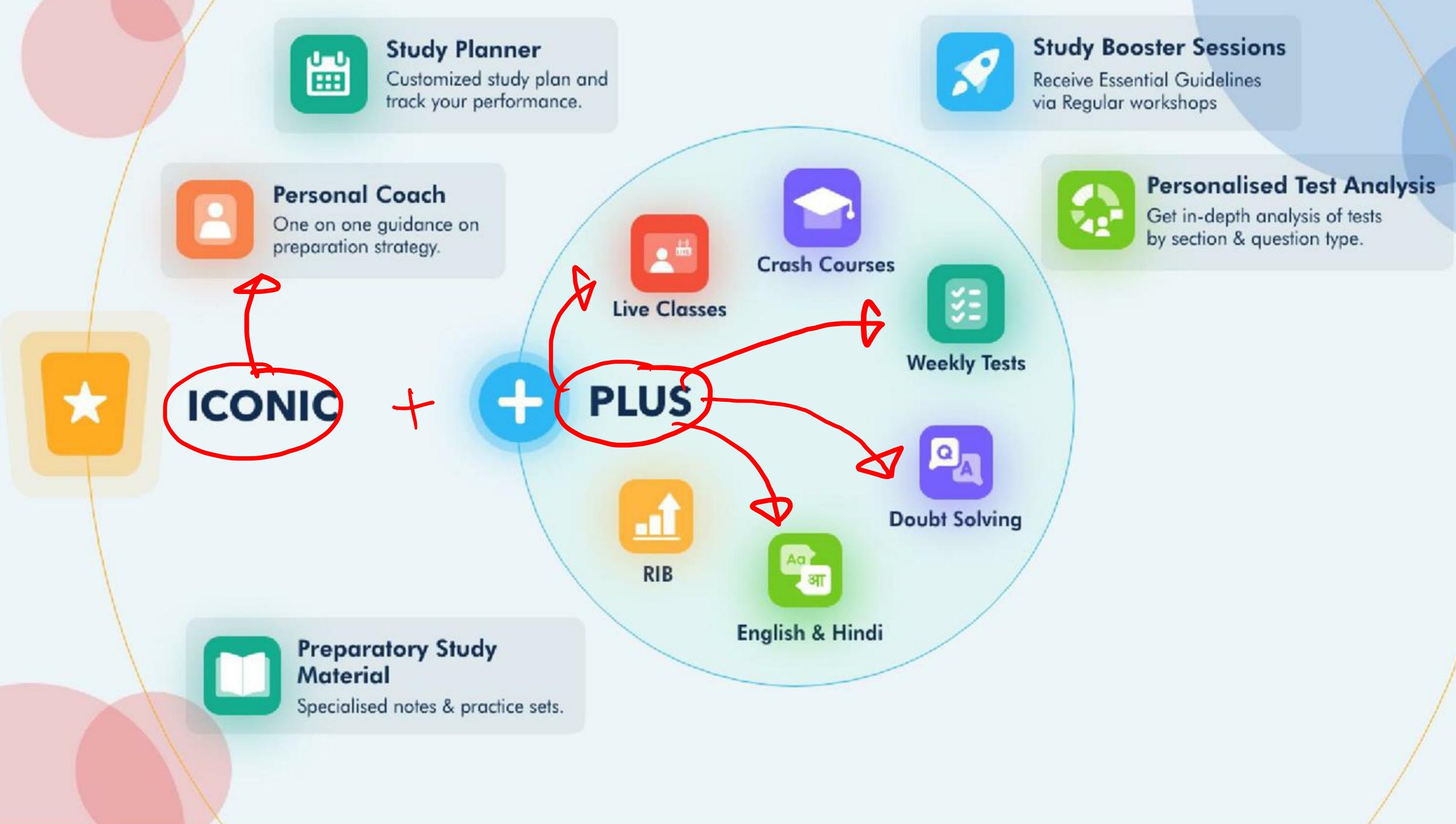
7+ Years Teaching Experience
Mentored 25k+ Students for
GATE, ESE & PSUs



Subjects Taken:

General Aptitude
Engineering Mathematics
Digital Electronics





Complete Package To CRACK GATE/ESE

The image displays a 4x4 grid of video thumbnails, with the last cell in the fourth row being empty. Each thumbnail contains the subject name in large, bold, white or yellow text on a colored background, followed by the teacher's name in a smaller white box at the bottom right.

- FLUID MECHANICS** by Mrigank Sir
- STRENGTH OF MATERIALS** by Abhishek Sir
- DESIGN OF STEEL STRUCTURE** by Babulal Sir
- GEOTECHNICAL ENGINEERING** by Abhishek Sir
- REINFORCED CEMENT CONCRETE (RCC)** by Aishwary Sir
- RCC** by Kshitij Sir
- OPEN FLOW CHANNEL** by Mrigank Saarav Sir
- IRRIGATION ENGINEERING** by Chetan Sir
- STRUCTURAL ANALYSIS** by Aishwary Sir
- SURVEYING** by Kshitij Sachan Sir
- GEOTECHNICAL ENGINEERING** by Aishwary Sir
- ENVIRONMENTAL ENGG** by Mrigank Saarav Sir
- ENGINEERING HYDROLOGY** by Chetan Sir
- HIGHWAY ENGINEERING** by Kshitij Sachan Sir

~~Analytical Aptitude~~

- Venn Diagram
- Syllogism
- Series
- Coding & Decoding
- Odd Man out
- Distance & Direction
- Blood Relation
- Seating Arrangements
- Clock & Calendar
- Puzzle

~~Quantitative Aptitude~~

- Number System
- Sequence & Series
- **Ratio & Proportion**
- Time, Speed & Distance
- Percentage
- Profit, Loss & Discount
- Average
- Allegation & Mixture
- Time & Work
- Pipes & Cisterns
- Powers, exponents and logarithms
- Algebra
- **Permutation & Combination**
- Probability
- Data Interpretation
- Mensuration and geometry

~~Spatial Aptitude~~

- Shape Matching - Two Dimensional
- Visual Comparison - Two Dimensional
- Group Rotation – Two Dimensional
- Combining Two Dimensional Shapes
- Cube Views in Three Dimensions
- Cubes in Two and Three Dimensions
- Other Solids in Two and Three Dimensions
- Block Counting in Three Dimensions
- Two-Dimensional Mirror Reflections
- Paper folding and Cutting

USE CODE

AVILIVE

TO GET
MAX DISCOUNT ON



Home Work Question - 1

Anmol had 10 paise, 25 paise and 50 paise coins in the ratio of 10 : 8 : 9 respectively. After giving Rs. 20 his mother he has Rs. 40. How many 50 paise coins did he have?

[RRB-2019(JE)]

A) 72

B) 60

C) 54

D) NOTA

$$\begin{array}{c} \text{10P} \quad \text{25P} \quad \text{50P} \\ [10 : 8 : 9] \times 10 \\ \text{No of} \quad \text{Money} \\ \text{coins} \quad \text{Rs. 220} \quad \text{Rs. 140} \\ \text{Rs. 200} \quad \text{Rs. 160} \\ \text{Rs. 180} \quad \text{Rs. 290} \end{array}$$

$$20 + 40 + 90 \rightarrow 260$$

$$150 \rightarrow 260$$

$$\underline{15 \text{ unit}} \rightarrow 6 \Rightarrow \frac{6}{15}$$

$$180 \text{ unit} = 180 \times \frac{6}{15}$$

$$= 72$$

USE CODE

AVILIVE

TO GET
MAX DISCOUNT ON



Home Work Question - 2

A bag contains 50 paisa, 25 paisa and 10 paisa coins in the ratio of 7 : 8 : 3 amounting to ₹87. Find the number of 10 paisa coins?

- A) 30 B) 45 C) 60 D) 50

$$\begin{array}{cccc} \text{50P} & \text{25P} & \text{10P} \\ (7 : 8 : 3) \times 20 & & \\ \text{No. of} & 140 & 160 & 60 \\ \text{Coins} & 70 & 40 & 6 \\ \text{Atmpt} & 70 & 40 & 6 \end{array}$$

$$70 + 40 + 6 \rightarrow 87$$

$$116 \rightarrow 87$$

$$1 \rightarrow \frac{87}{116}$$

$$\text{Count} = 6 \times \frac{87}{116} = 45$$

USE CODE

AVILIVE

TO GET
MAX DISCOUNT ON



Today's Class Agenda

➤ Age Based Questions

Ratio Based

Arithmetic

USE CODE

AVILIVE

TO GET
MAX DISCOUNT ON

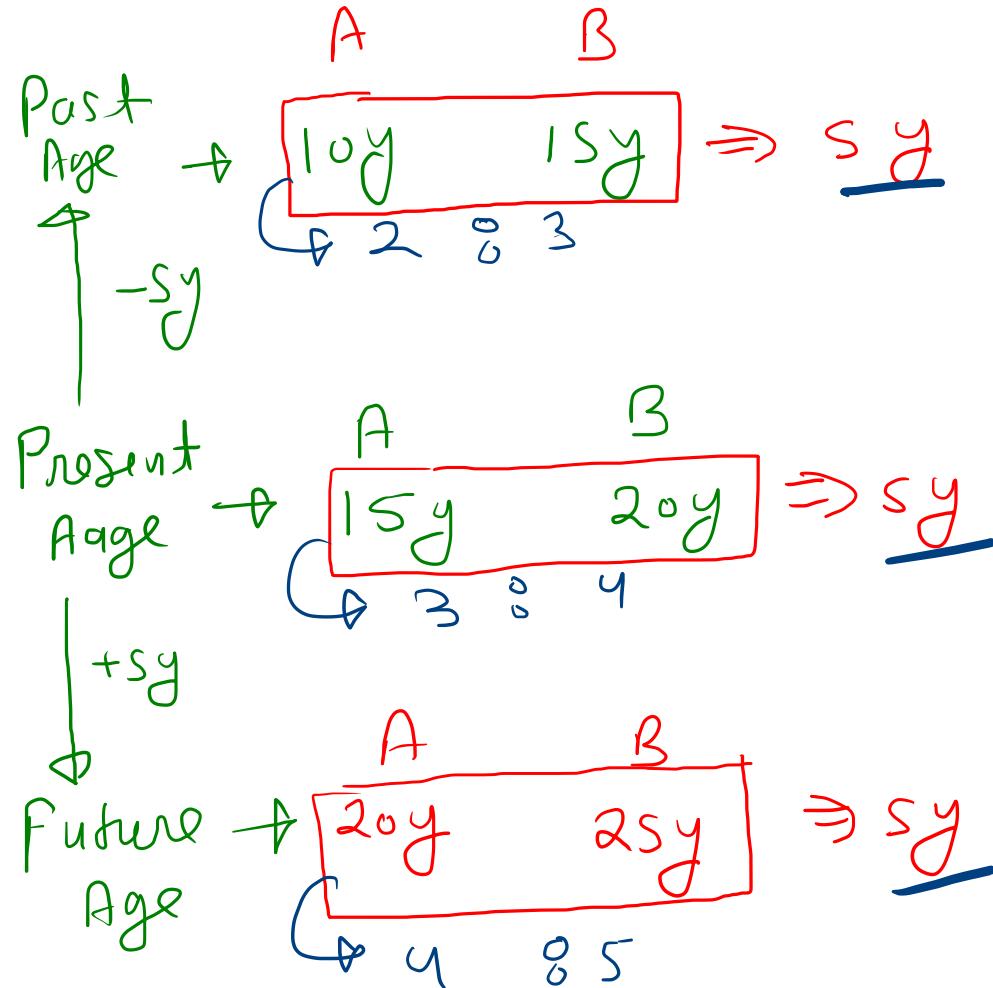
 plus
Subscription

Age Based Questions

① Age same scale ↑

② Age difference constant

③ Age Ratio change every year



USE CODE

AVILIVE

TO GET
MAX DISCOUNT ON

 **plus**
Subscription



- ✓ 1) The ratio of the present ages of A and B is 8 : 9. After 9 years, this will become 19 : 21. C is 3 years younger to B. What is the present age (in years) of C?
- A) 49 B) 48 C) 51 D) 52

Present Age

$\begin{array}{c} \text{A} \quad \text{B} \\ [8 : 9] \Rightarrow 1 \end{array}$

$\begin{array}{c} \text{A} \quad \text{B} \\ [16 : 18] \Rightarrow 2 \end{array}$

$\begin{array}{c} \text{A} \quad \text{B} \\ [19 : 21] \Rightarrow 2 \end{array}$

$\begin{array}{c} \text{A} \quad \text{B} \\ [16 + 3 : 18 + 3] = 54 \\ 16 + 3 = 19 \\ 18 + 3 = 21 \\ 19 : 21 \Rightarrow 2 \end{array}$

$3 \rightarrow 9$

$1 \rightarrow 3$

USE CODE

AVILIVE

TO GET

MAX DISCOUNT ON

 **plus**
Subscription



- 1) The ratio of the present ages of A and B is $8 : 9$. After 9 years, this will become $19 : 21$. C is 3 years younger to B. What is the present age (in years) of C?
- A) 49 B) 48 C) 51 D) 52

~~R.A.~~
~~(A)~~ $\xrightarrow{\text{Age} \neq \text{Integers}}$
~~S2 \neq B~~
 ~~$A : B \neq 8 : 9$~~
~~* Age \neq Integers~~

~~(B)~~ $\xrightarrow{\text{Age} \neq \text{Integers}}$
~~48 \rightarrow C~~
~~S \rightarrow B~~
 ~~$A : B \neq 8 : 9$~~
~~C \rightarrow C~~
~~S4 \neq B~~
 ~~$A : B \neq 8 : 9$~~
~~(D)~~ $\xrightarrow{\text{Age} \neq \text{Integers}}$
~~S2 \neq C~~
~~S5 \neq B~~
 ~~$A : B \neq 8 : 9$~~

USE CODE

AVILIVE

TO GET
MAX DISCOUNT ON


Subscription



- 2) The ratio of the present ages of A and B is 6 : 5. Four years ago, this ratio was 5 : 4. What will be the ratio of the ages of A and B after 12 years from now?
- A) 3 : 2 B) 8 : 7 C) 7 : 6 D) 9 : 8

A B

Past Age → $5 : 4 \Rightarrow 1$

Present Age → $\downarrow +1 \quad \downarrow +1$
 $6 : 5 \Rightarrow 1$

Future Age → $(24) \quad (20)$

$24 + 12 : 20 + 12$

1 unit = 4 years

$$A + 24 \xrightarrow{+12} 36$$

$$B + 20 \xrightarrow{+12} 32$$

$$\frac{36}{32} \xrightarrow{\frac{9}{8}} \frac{9}{8}$$

USE CODE

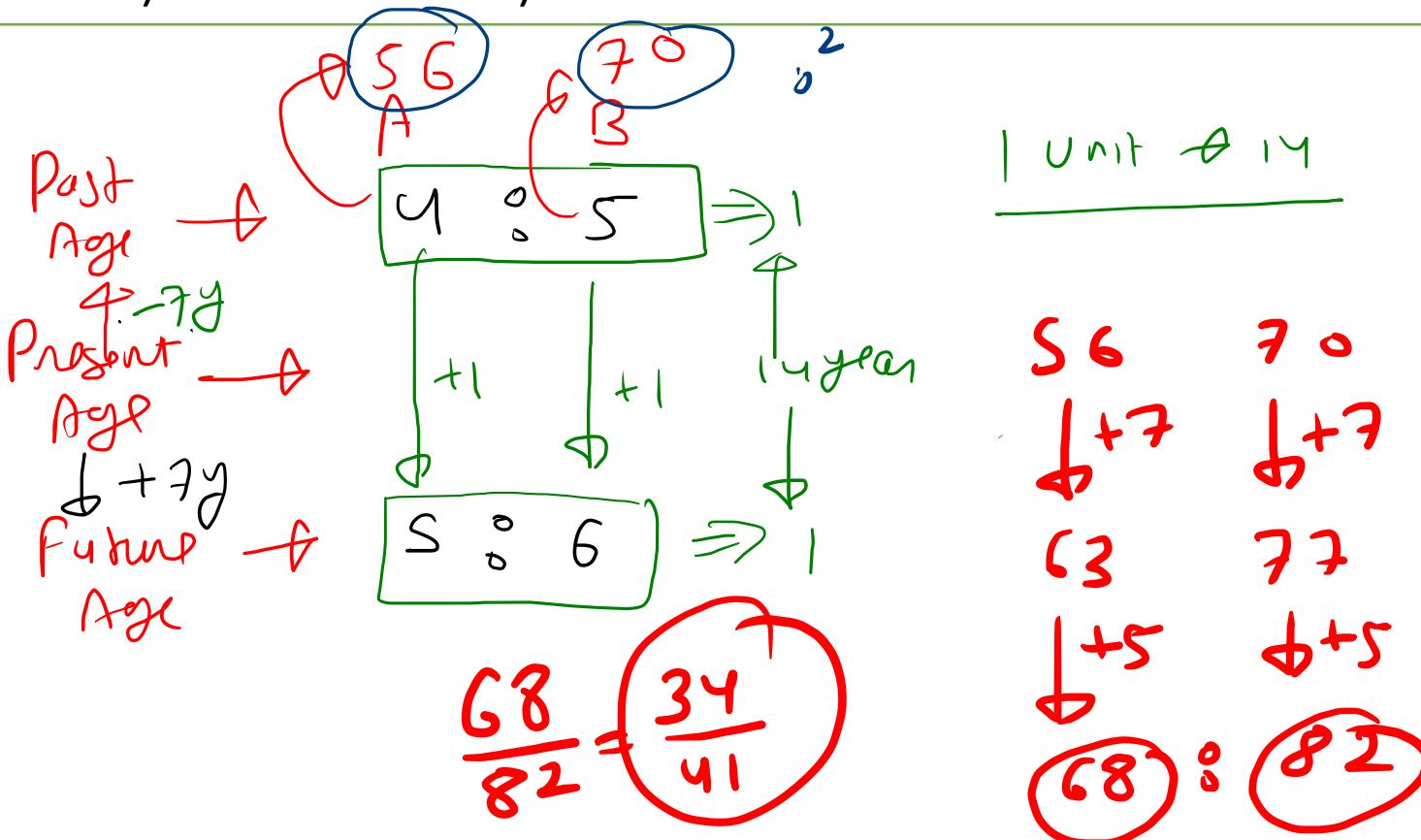
AVILIVE

TO GET
MAX DISCOUNT ON

 **plus**
Subscription



- 3) Seven year ago, the ages (in years) of A and B were in the ratio 4 : 5 and 7 year hence, their ages will be in the ratio 5 : 6. What will be the ratio of their ages 5 years from now?
- A) 34 : 41 B) 33 : 40 C) 31 : 33 D) 33 : 34



USE CODE

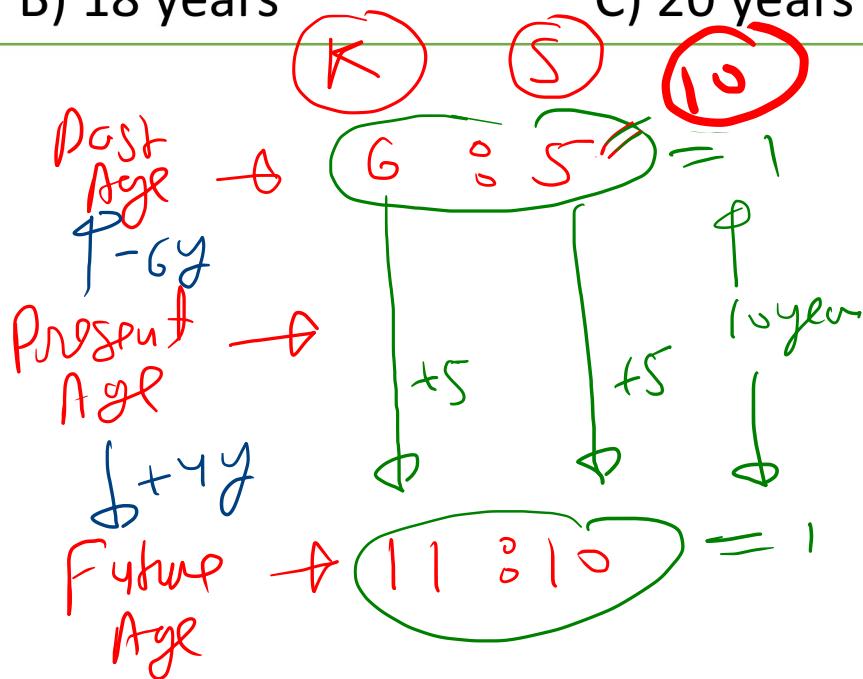
AVILIVE

TO GET
MAX DISCOUNT ON

 plus
Subscription



- 4) Six years ago, the ratio of the ages of Kunal and Sagar was $6 : 5$ four years hence, the ratio of their ages will be $11 : 10$ what is sagar's age at present? [AAI (ATC)-2016]
- A) 16 years B) 18 years C) 20 years D) 22 years



$$\begin{aligned}
 S &\rightarrow 10 \\
 1 &\rightarrow 2 \\
 10 + 6 &\rightarrow 16
 \end{aligned}$$



5) The present ages of 3 brothers are in the proportion 3:4:5. After 10 years the sum of their ages will be 78. What are their ages now?

[ESE 2017, 2 MARKS]

A) 12, 16 and 20

B) 15, 20 and 25

C) 21, 28 and 35

D) 24, 32 and 4

RA

3 : 4:5

$$\begin{array}{r} 12+16+20 \\ 10+10+10 \\ \hline 78 \end{array}$$

3:4:5

$$\begin{array}{r} 15+20+25 \\ 10+10+10 \\ \hline 90 \end{array}$$

3:4:5

$$\begin{array}{r} 21+28+35 \\ 10+10+10 \\ \hline 70 \end{array}$$

USE CODE

AVILIVE

TO GET
MAX DISCOUNT ON


Subscription



6) Hema's age is 5 years more than twice Hari's age. Suresh's age is 13 year less than 10 times Hari's age. If Suresh is 3 times as old as Hema. How old is Hema?

[GATE 2018, 1 MARK (CE)]

A) 14

B) 17

C) 18

D) 19

Hema 9

USE CODE

AVILIVE

TO GET

MAX DISCOUNT ON

 plus
Subscription

HWQ -2

Home Work Question

The sum of the age of a father and his son is 100 years now. 5 years ago their age were in the ratio of 2 : 1. The ratio of the age of father and son after 10 years will be :

- A) 5: 3
- B) 4 : 3
- C) 10 :7
- D) 3:5

USE CODE

AVILIVE

TO GET

MAX DISCOUNT ON



Follow Me On

Sunday → Marathon
Number System
Percentage

XX (1)
XX (2)
X*



unacademy

<https://unacademy.com/@unacademy-user-LKWBX7PD3KPG>

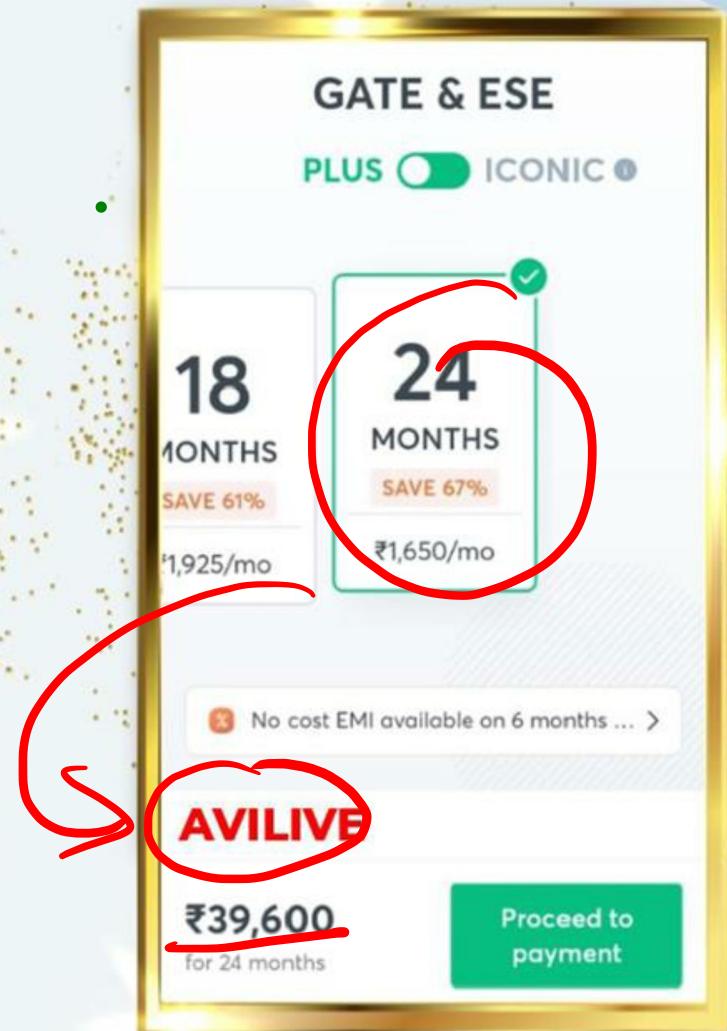
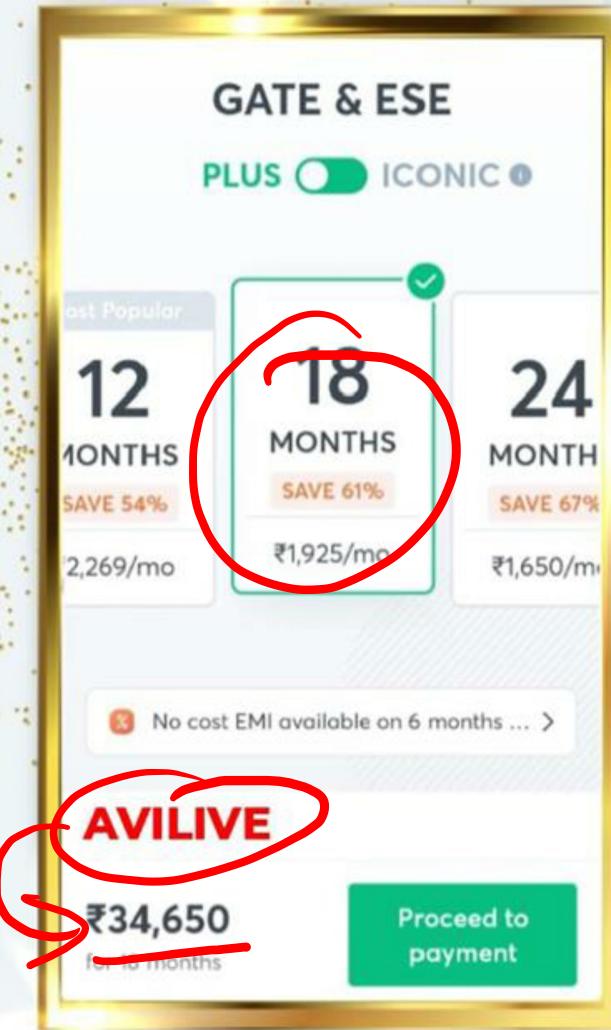
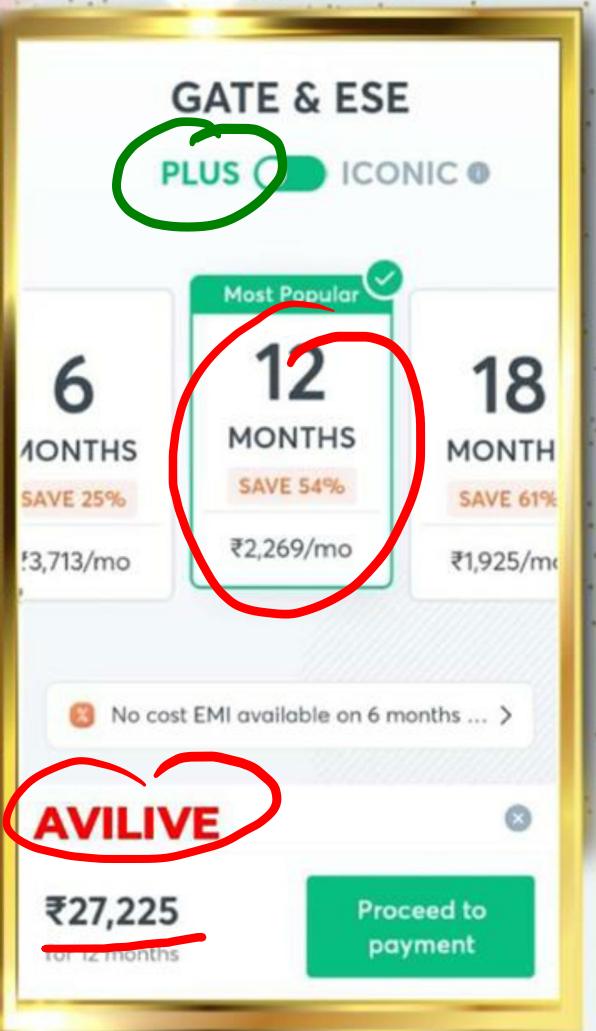
USE CODE

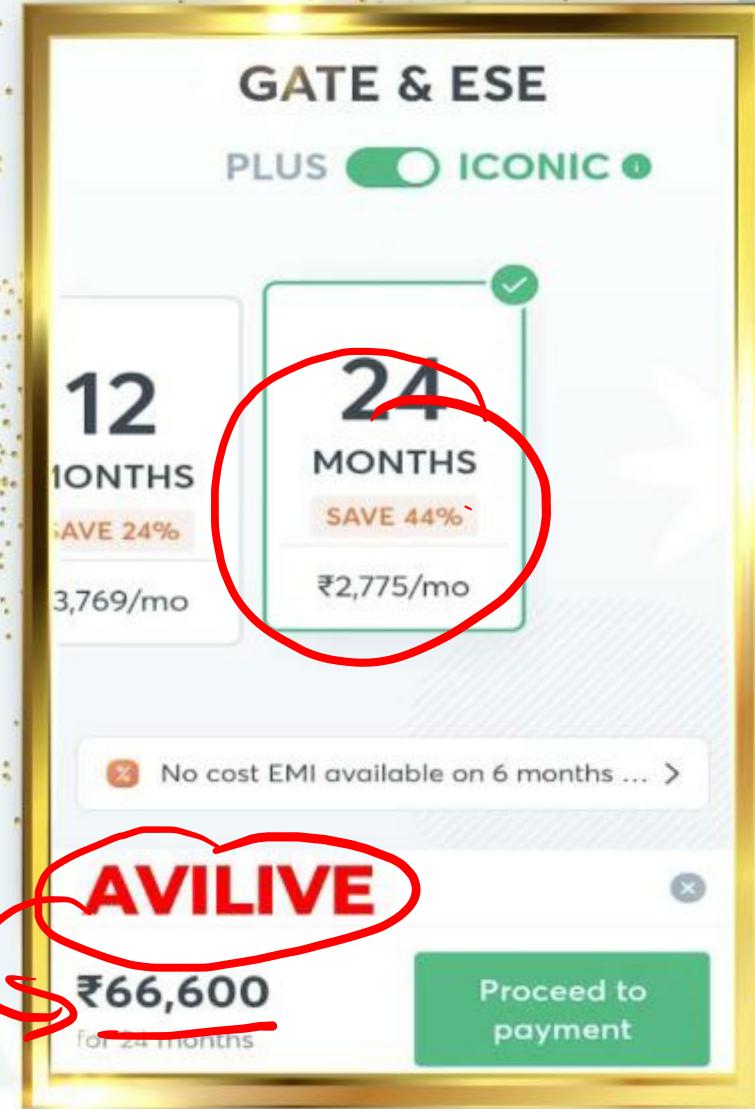
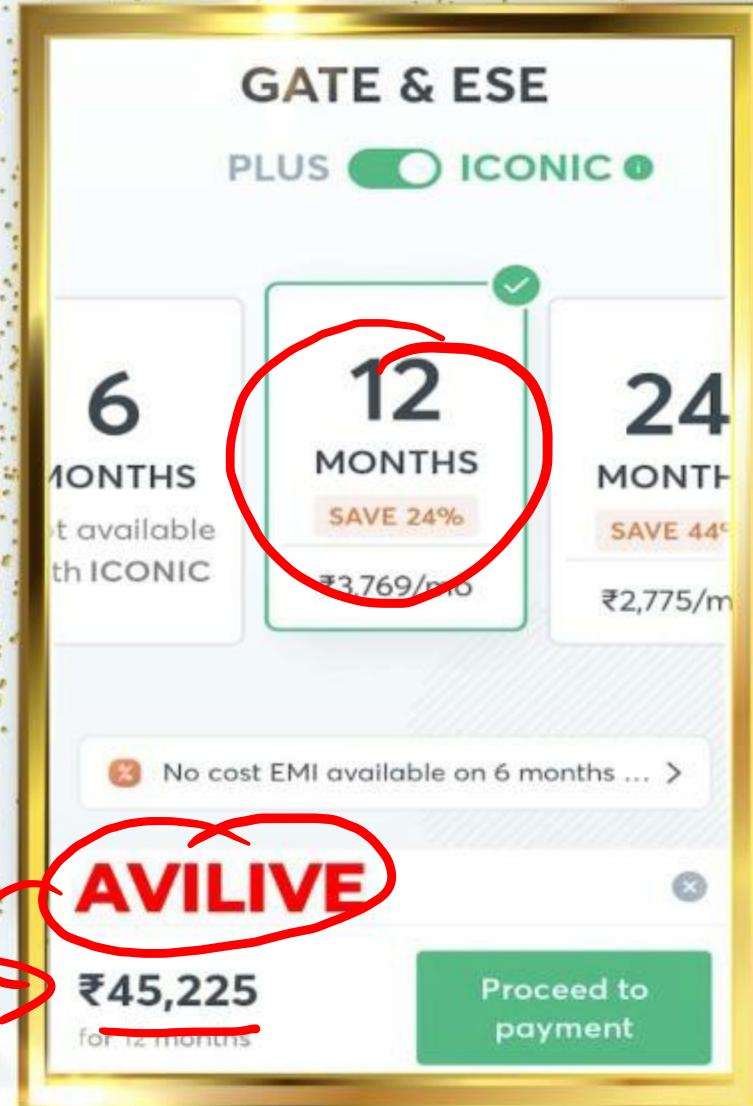
AVILIVE

TO GET

MAX DISCOUNT ON

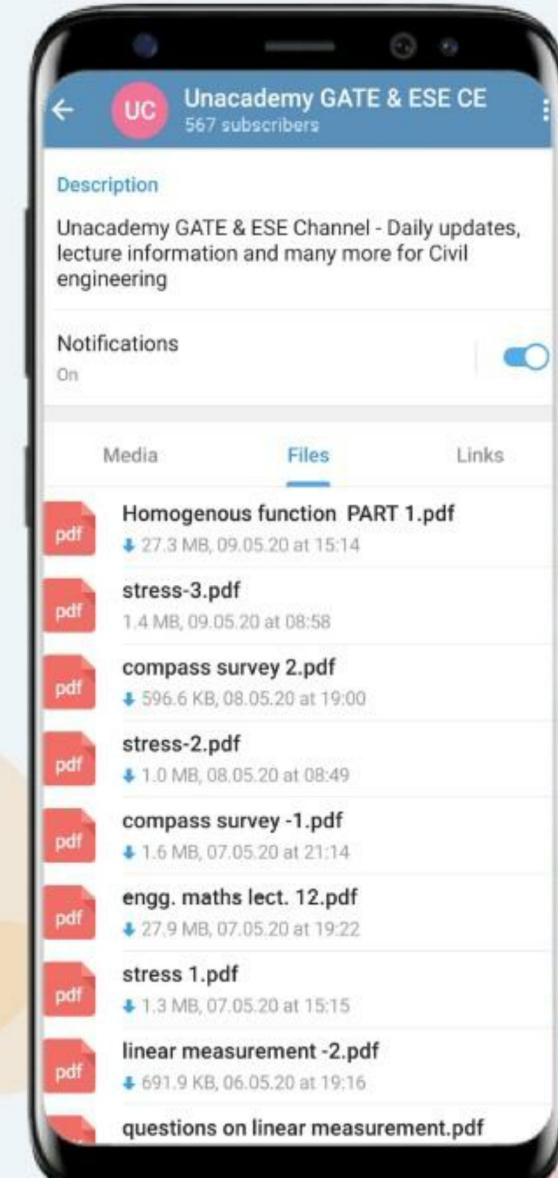
plus
Subscription







<https://t.me/unacademygatece>



USE CODE

AVILIVE

TO GET
MAX DISCOUNT ON

 plus
Subscription

India's No. 1 Study Channels

Kreatryx GATE
EE,ECE,IN



Unacademy GATE
ME,PI,XE



Unacademy
GATE CE



Unacademy
GATE Telugu



Unacademy
SSC JE



Unacademy
Computer Science



Unacademy GATE
Questions



Electrical
Junction



Engineering
Pathshala



GS Terminal -
RRB, SSC



USE CODE

AVILIVE

TO GET

MAX DISCOUNT ON

 **plus**
Subscription



Thank You



SUBSCRIBE



USE CODE

AVILIVE

TO GET

MAX DISCOUNT ON

plus
Subscription