

GATE 2021

GENERAL APTITUDE

धमाकेदार ट्रिक के साथ 🔥🔥

**TIME & WORK -3,
LEFT / JOIN THE WORK**



AVINASH SIR

AVINASH SINGH SIR

GATE | EE (CE)



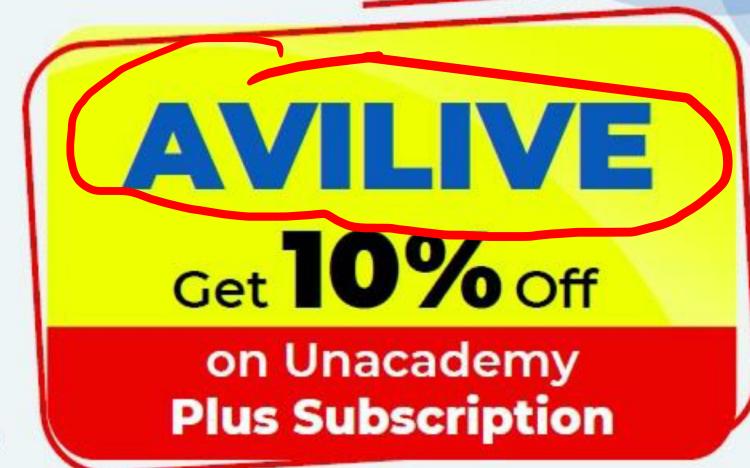
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CAT (Quantitative Section)



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GATE, ESE & PSUs



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General Aptitude
Engineering Mathematics
Digital Electronics



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One on one guidance on preparation strategy.

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PLUS

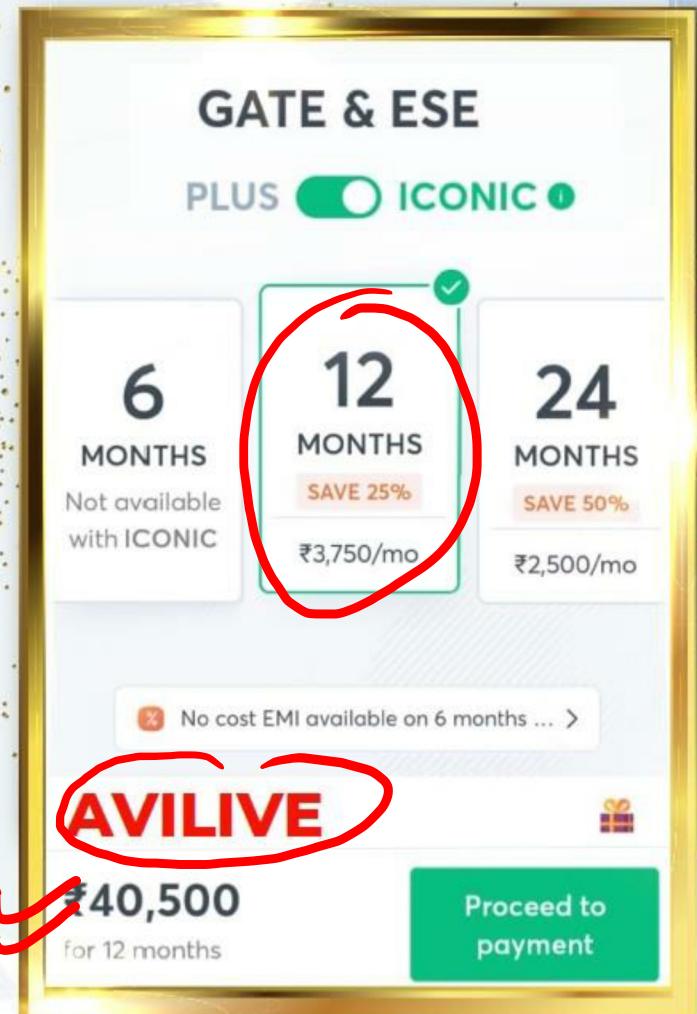
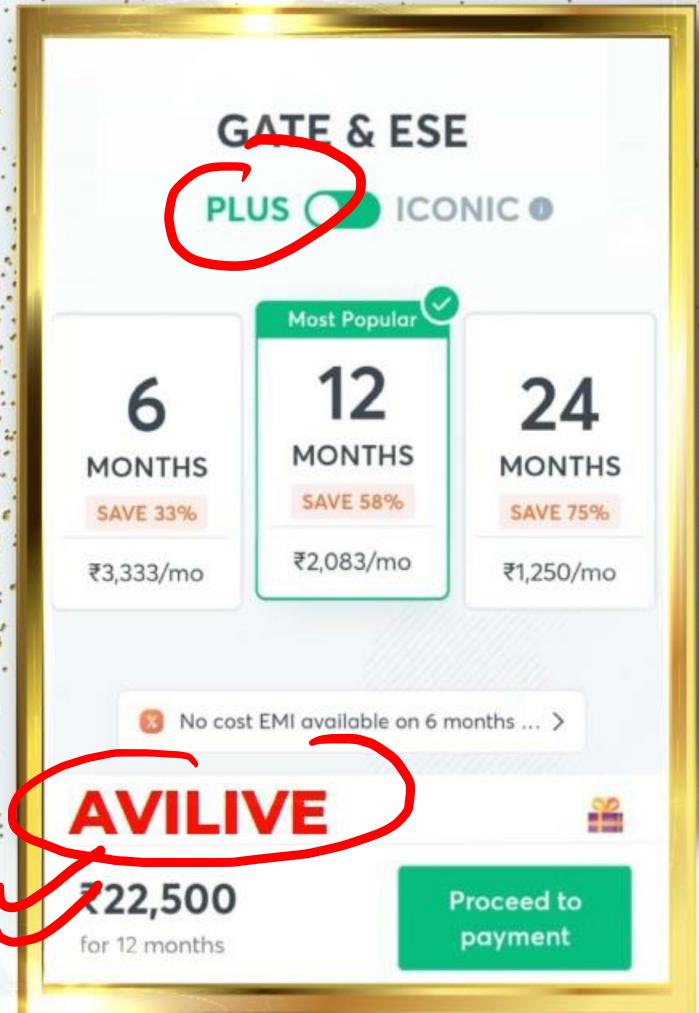
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- Crash Courses
- Weekly Tests
- Doubt Solving
- RIB
- English & Hindi

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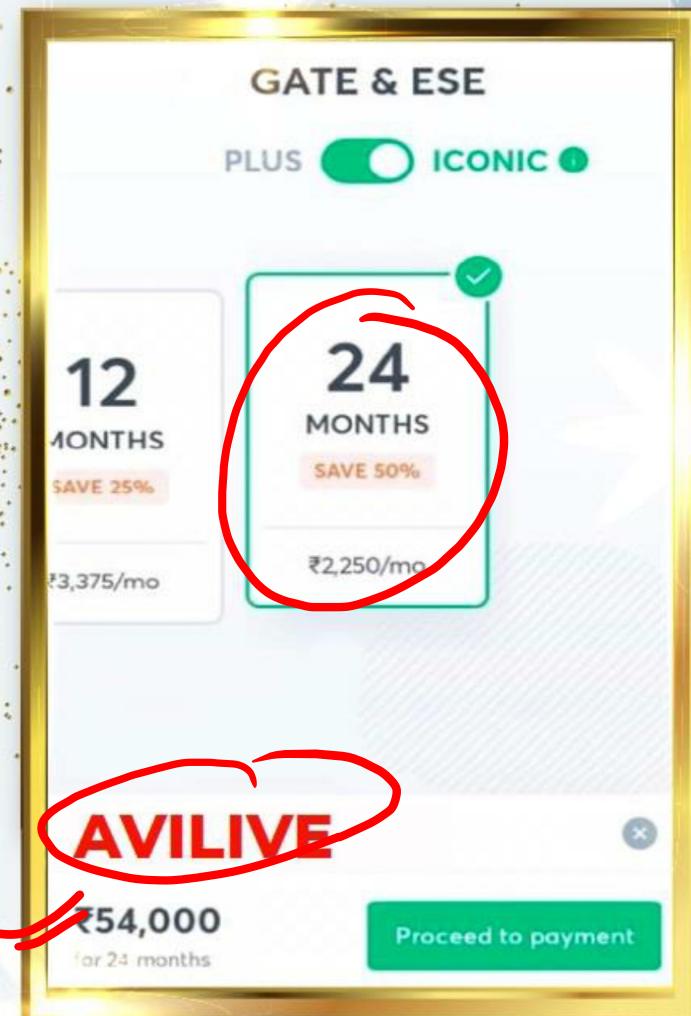
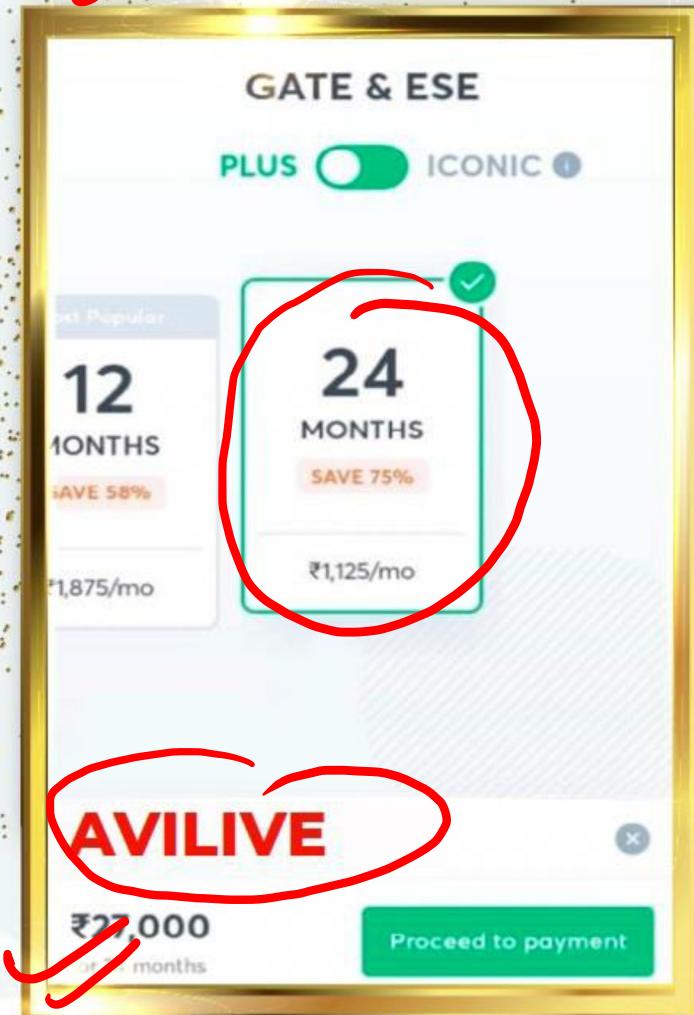
Complete Package To CRACK GATE/ESE

The image displays a grid of 15 educational modules for GATE/ESE preparation, arranged in three rows and five columns. Each module is represented by a colored box containing the subject name, a Unacademy logo, and a photo of the instructor.

- FLUID MECHANICS** (Top Left): Instructor - MRIGANK SIR
- STRENGTH OF MATERIALS** (Top Middle): Instructor - Abhishek Sir
- DESIGN OF STEEL STRUCTURE** (Top Right): Instructor - BABULAL SIR
- GEOTECHNICAL ENGINEERING** (Second Row, Left): Instructor - ABHISHEK SIR
- REINFORCED CEMENT CONCRETE (RCC)** (Second Row, Middle): Instructor - Aishwary Sir
- RCC** (Second Row, Right): Instructor - KSHITIJ SIR
- OPEN FLOW CHANNEL** (Second Row, Far Right): Instructor - Mrigank Saurav Sir
- IRRIGATION ENGINEERING** (Third Row, Left): Instructor - CHETAN SIR
- STRUCTURAL ANALYSIS** (Third Row, Middle): Instructor - AISHWARY SIR
- SURVEYING** (Third Row, Right): Instructor - KSHITIJ SACHAN SIR
- GEOTECHNICAL ENGINEERING** (Bottom Left): Instructor - AISHWARY SIR
- ENVIRONMENTAL ENGG** (Bottom Middle Left): Instructor - Mrigank Saurav Sir
- ENGINEERING HYDROLOGY** (Bottom Middle Right): Instructor - CHETAN SIR
- HIGHWAY ENGINEERING** (Bottom Right): Instructor - KSHITIJ SACHAN SIR



2nd & 3rd



GATE में 2 Number पक्के

MARATHON SESSION

PERMUTATIONS & COMBINATIONS



LIVE



9:30

unacademy

AVINASH SIR

Analytical Aptitude

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

Quantitative Aptitude

- Number System
- Sequence & Series
- Ratio & Proportion
- Time, Speed & Distance
- Percentage
- Profit, Loss & Discount
- Average
- Allegation & Mixture
- Time & Work
- 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

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Home Work Question

It takes two hours for a person X to mow the lawn. Y can mow the same lawn in four hours. How long (in minutes) will it take X and Y, if they work together to mow the lawn?

A) 60

B) 80

C) 90

D) 120

[GATE-2019, 1 MARK (CS, CE)]

$$\frac{1}{x} + \frac{1}{y} = \frac{1}{2}$$
$$\frac{1}{y} = \frac{1}{4}$$

$$x + y = 2 + 1 = 3 \text{ units/hr}$$

$$T = \frac{1}{3} \text{ hr} \times 60$$

80 min

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Problem based on Joining/Leaving

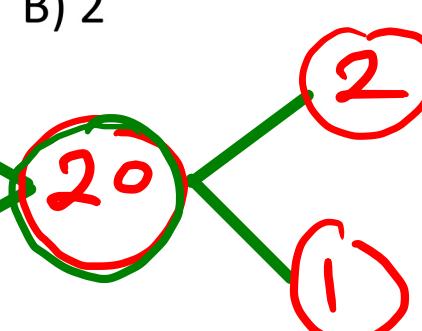
** 1) Ajeet can do a job 10 days. Kapil can do the same job in 20 days. They together start doing the job but after 4 days Kapil leaves. How many more days will be required by Ajeet to complete this job alone?

A) 4

$A \rightarrow 10$

$K \rightarrow 20$

B) 2



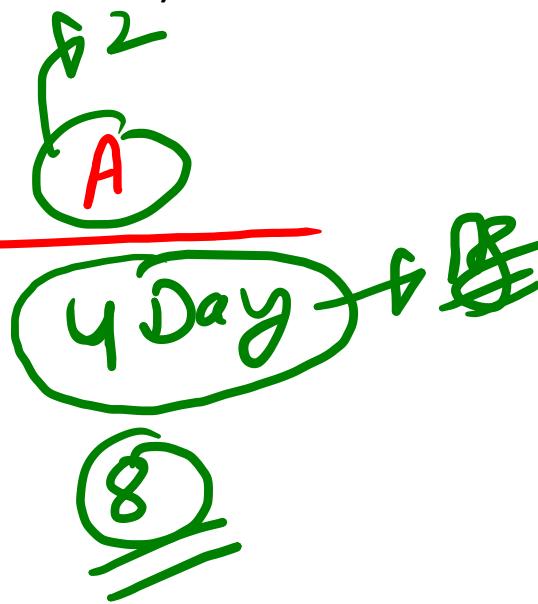
C) 5

$A+K$

1 Day

$4 \times 3 = 12$

D) 3



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~~**~~ 2) A and B can do a work in 18 and 24 days respectively, they worked together for 8 days and then A left, the remaining work was finished by B in

A) 5 Day

T

B) 5(1/3) Day

n

C) 8 Day

D) 10 Day

A → 18

B → 24

T.W.

?

72

4 unit/D

3 unit/D

7

A + B

8 Day

$8 \times 7 = 56$

B

3

$\frac{(72 - 56)}{3} = \frac{16}{3}$

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✓ 3) A can do a piece of work in 10 days while B can do it in 15 days. They begin together but 5 days before the completion of work, B leaves off. Find the number of days for the work to be completed?

A) 7

B) 6

C) 9

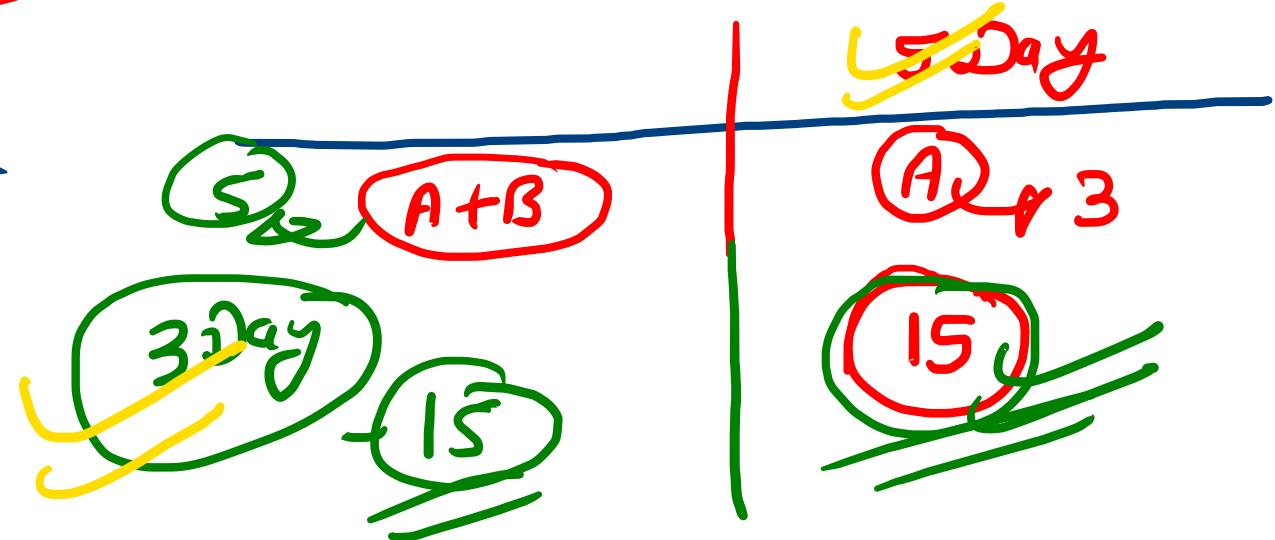
D) 8

$$\begin{array}{l} A \rightarrow 10 \\ B \rightarrow 15 \end{array}$$

30

3

2



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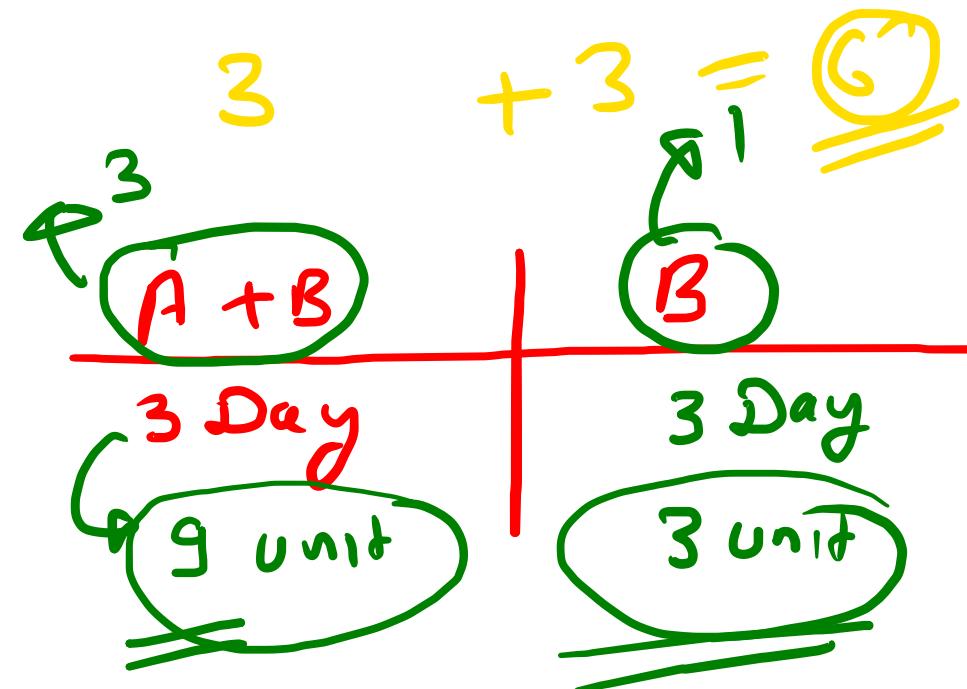
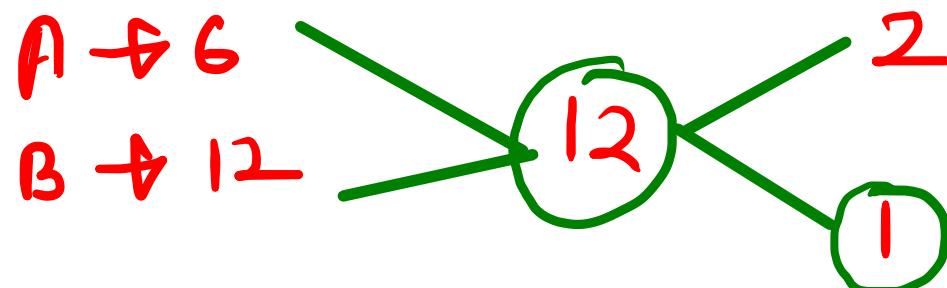
~~Q4)~~ A and B can do a job in 6 and 12 days respectively, they began the work together but A leaves after 3 days, then the total number of days needed for the completion of the work is:

A) 4 day

B) 5 day

C) 6 day

D) 9 day



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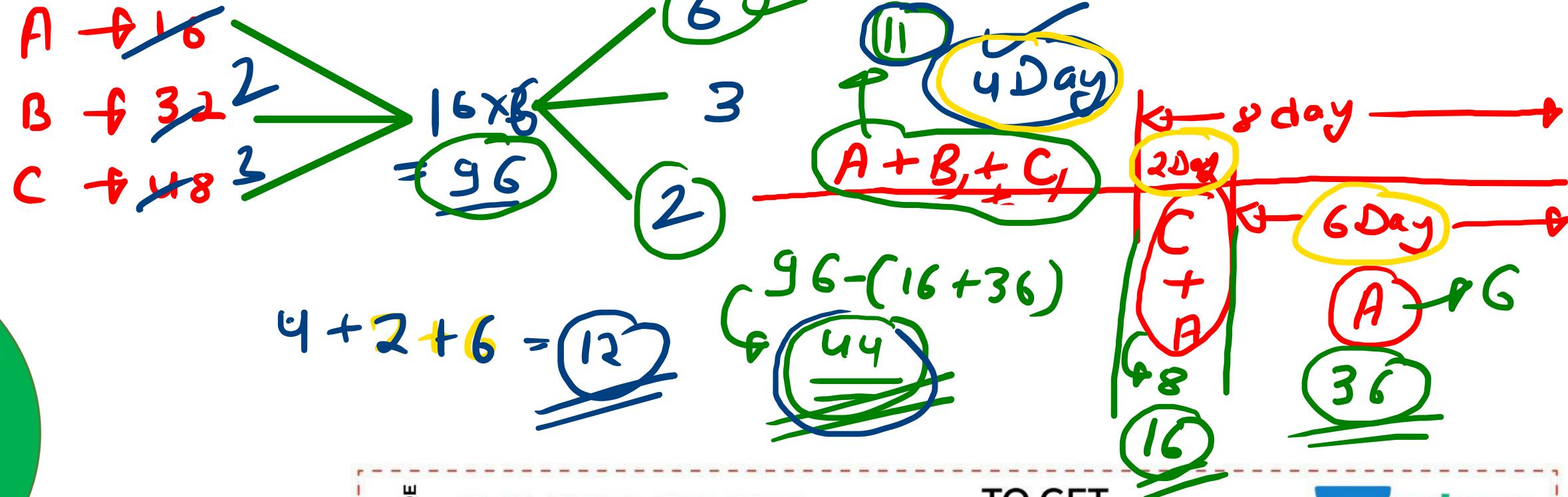
5) A, B and C can do a work separately in 16, 32 and 48 days respectively, they started the work together but B left off 8 days and C six days before the completion of the work. In what time is the work finished?

A) 10 Day

B) 9 Day

C) 12 Day

D) 14 Day



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** *

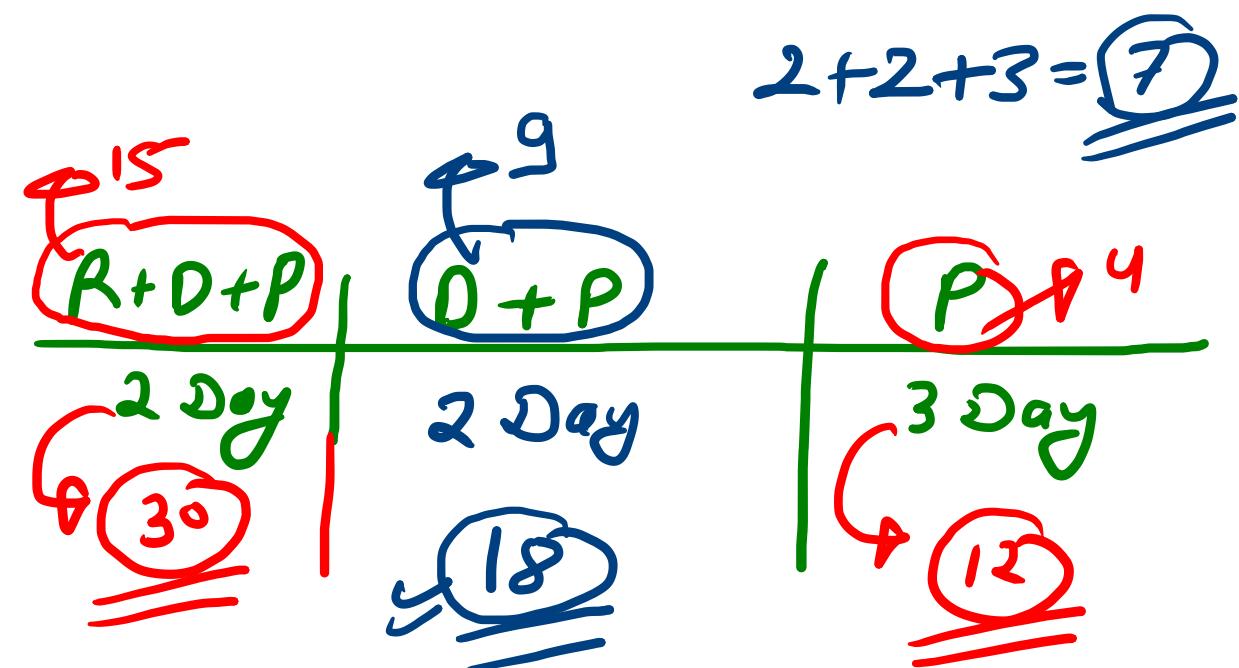
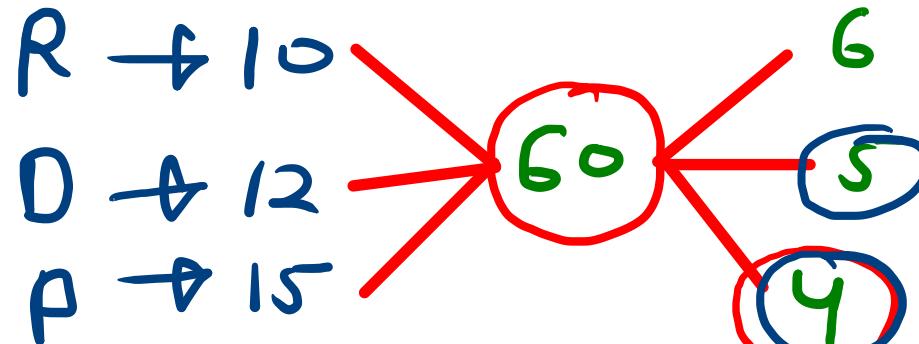
Q) Ram can do a piece of work in 10 days, Deepak in 12 days and Parul in 15 days. They all start together but Ram leaves after 2 days and Deepak leaves 3 days before the work is completed. In how many days is the work completed?

A) 6 Days

B) 7 Days

C) 5 Days

D) 4 Days



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7) A, B and C can do a piece of work in 20, 30 and 60 days respectively. In how many days can A do the work if he is assisted by B and C on every third day?

A) 10

$$A \uparrow 20$$

$$B \uparrow 30$$

$$C \uparrow 60$$

B) 12

$$3$$

$$2$$

$$1$$

15

32 days

$$\begin{array}{c} 1^{\text{st}} \quad 2^{\text{nd}} \quad 3^{\text{rd}} \\ \downarrow \quad \downarrow \quad \downarrow \\ 3 + 3 + \frac{3}{(2+1)} \end{array}$$

12

D) 20

$$32 \text{ days}$$

$$4^{\text{th}} \quad 5^{\text{th}} \quad 6^{\text{th}}$$

$$3 \quad 3 \quad 3$$

$$(2+1)$$

12

3 Day

$$7^{\text{th}}$$

$$3$$

12

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Q) While working 7 hours a day, A alone can complete a piece of work in 6 days and B alone in 8 days, in what time would they complete it together, working 8 hours a day?

(A) 3 days

(B) 4 days

(C) 2.5 days

(D) 3.6 days

$$A \rightarrow 6 \times 7 = 42 \text{ hrs}$$
$$B \rightarrow 8 \times 7 = 56 \text{ hrs}$$

168

$\frac{4 \text{ Unit/hr}}{3 \text{ Unit/hr}}$

$$A+B \rightarrow 7 \text{ Unit/hr}$$

$$A+B \rightarrow 8 \times 7 \text{ Unit/day}$$
$$= 56 \text{ Unit/day}$$

$$T = \frac{168}{56} = 3 \text{ Day}$$

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~~Q~~ Radhika can finish some work in 6 days working 5 hours a day. Gita can finish the same in 15 days working 3 hours a day. In how many days can they finish the work if working together at 3 hours per day?

A) 4

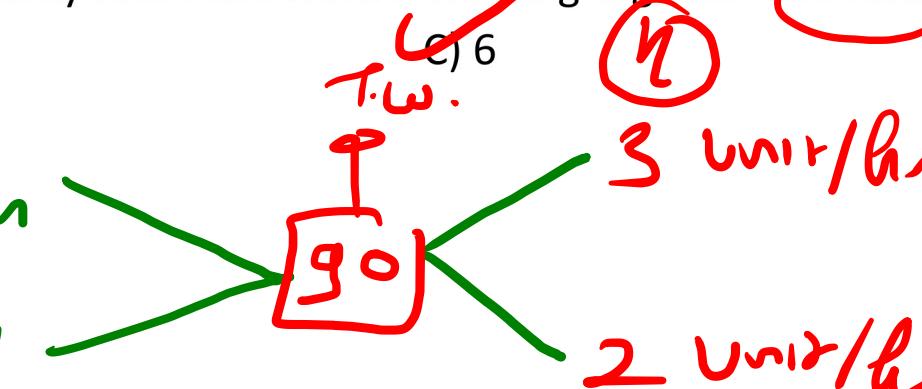
B) 5

C) 6

D) ~~NOTA~~

$$R \rightarrow 6 \times 5 = \underline{\underline{30 \text{ hr}}}$$

$$G \rightarrow 15 \times 3 = \underline{\underline{45 \text{ hr}}}$$



5 pm

$$R+G \rightarrow 5 \text{ unit/hr}$$

$$R+G \rightarrow \underline{\underline{15 \text{ unit/Day}}}$$

$$T = \frac{90}{15} = \underline{\underline{6 \text{ Day}}}$$

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It takes two hours for a person X to mow the lawn. Y can mow the same lawn in four hours. How long (in minutes) will it take X and Y, if they work together to mow the lawn?

[GATE-2019, 1 MARK (CS, CE)]

- A) 60
- B) 80
- C) 90
- D) 120

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MARATHON SESSION

PERMUTATIONS & COMBINATIONS



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Avinash Singh

Teaching isn't my job, it's my passion

16 Watch mins

16 Watch mins (last 30 days)

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5 PM

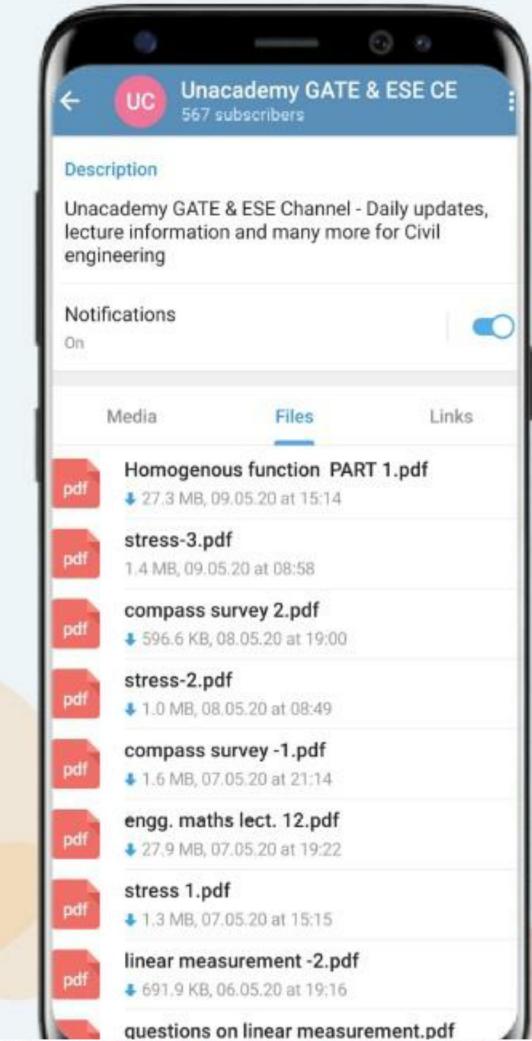
Reasoning

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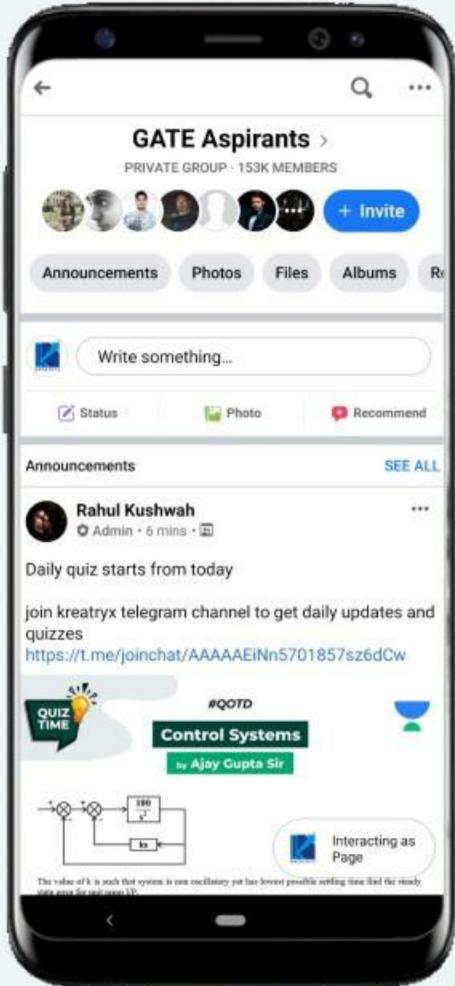
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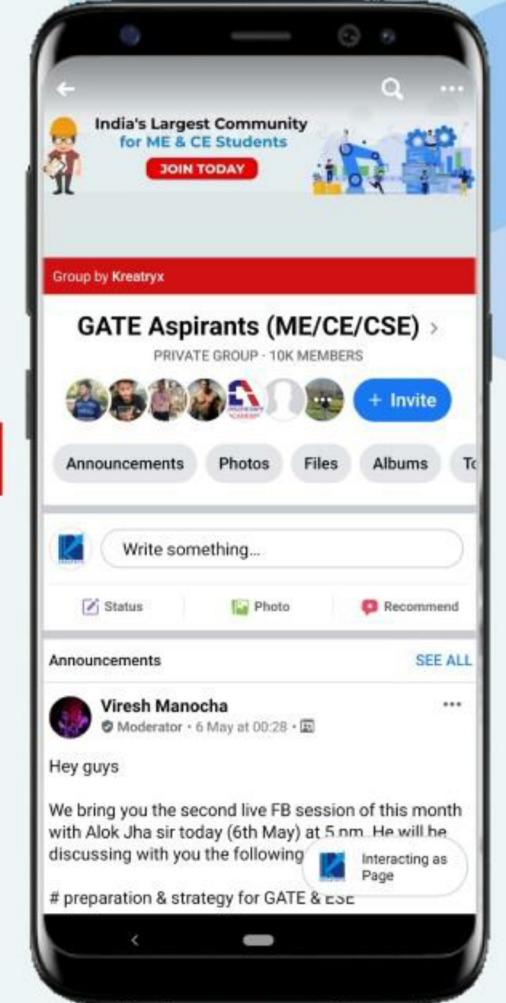
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