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GATE 2021

GENERAL APTITUDE

धमाकेदार ट्रिक के साथ 🔥🔥

S }
PROBABILITY-4 }



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GATE | EE (CE)



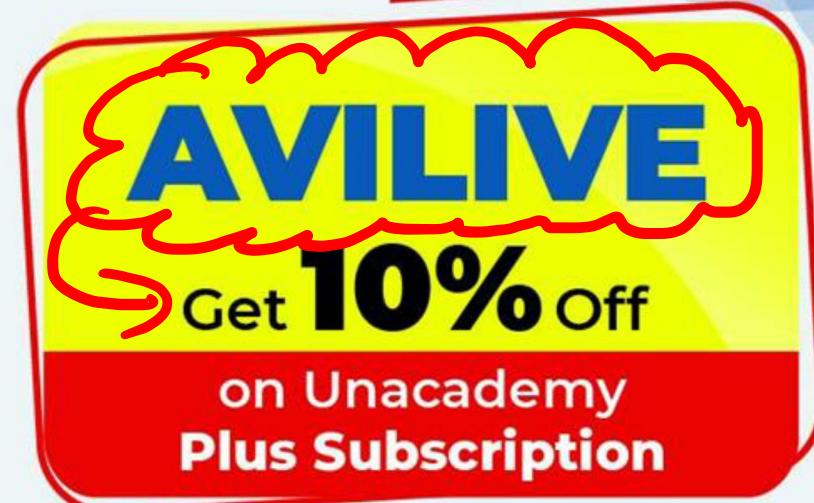
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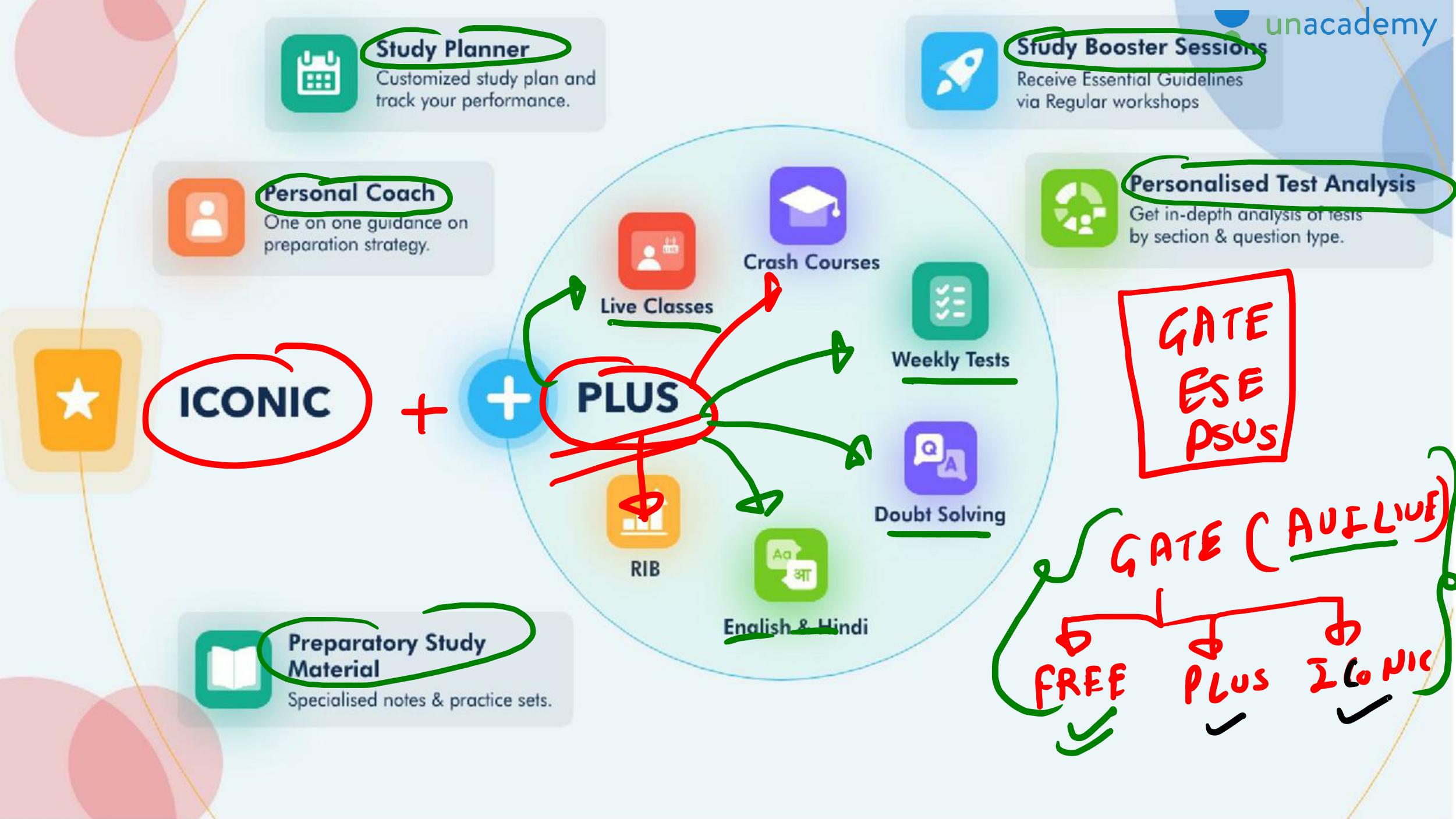


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Subjects Taken:
General Aptitude
Engineering Mathematics
Digital Electronics





Plus Batches Taken by Top Educators



Civil Engg

A card for a 'Doubt Clearing Batch for GATE 2021 (Civil)'. It features four Unacademy educators in a circular profile. Below the profiles are two language options: HINDI and ENGLISH. The text 'Doubt Clearing Batch for GATE 2021 (Civil)' is displayed, along with the start date 'Started on Oct 19' and the instructor 'Anirudh Singh Rathore and 2 more'. A lock icon indicates the batch is locked.

A card for a 'Spark ESE Prelims 2021 (Civil) - Batch A (English)'. It features three Unacademy educators in a circular profile. Below the profiles are two language options: ENGLISH and HINDI. The text 'Spark ESE Prelims 2021 (Civil) - Batch A (English)' is displayed, along with the start date 'Started on Nov 20' and the instructor 'Praveen Kulkarni and 2 more'. A lock icon indicates the batch is locked.

A card for a 'Target ESE Prelims 2021 (Civil) - Batch C'. It features four Unacademy educators in a circular profile. Below the profiles are two language options: ENGLISH and HINDI. The text 'Target ESE Prelims 2021 (Civil) - Batch C' is displayed, along with the start date 'Starts on Dec 7' and the instructor 'Anirudh Singh Rathore'. A lock icon indicates the batch is locked.

A card for a 'GATE Rank Improvement Batch (Civil) 2021 - Part II'. It features four Unacademy educators in a circular profile. Below the profiles is one language option: ENGLISH. The text 'GATE Rank Improvement Batch (Civil) 2021 - Part II' is displayed, along with the start date 'Started on Jul 1' and the instructor 'Chetan Saxena and 3 more'. A lock icon indicates the batch is locked.

A card for a 'GATE Rank Improvement Batch (Civil) 2021 - Part I'. It features three Unacademy educators in a circular profile. Below the profiles is one language option: ENGLISH. The text 'GATE Rank Improvement Batch (Civil) 2021 - Part I' is displayed, along with the start date 'Started on Jun 15' and the instructor 'Chetan Saxena and 2 more'. A lock icon indicates the batch is locked.



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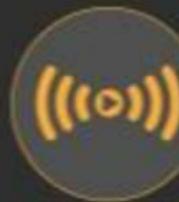
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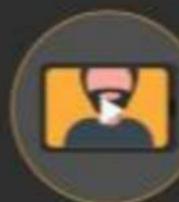
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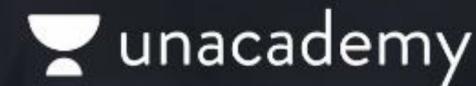
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लो आ गया

Spatial Aptitude



Daily



5 PM

Link, Given Below



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(Quantitative)

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General Aptitude



Quantitative
Aptitude

Spatial
Aptitude

Verbal
Aptitude

Analytical
Aptitude

- Paper folding and Cutting
- 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

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General Aptitude

Quantitative
Aptitude

Analytical
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Verbal
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Spatial
Aptitude



- Venn Diagram
- Syllogism
- Series
- Analogy
- Puzzle

25

- Coding & Decoding
- Distance & Direction
- Blood Relation
- Seating Arrangements
- Clock & Calendar

TEJAS BATCH (Starting From 25th Jan)

CRACK AAI (ATC) EXAM



KREATRYX GATE - EE, ECE, IN

Faculty	Subject	Date(from)	Date(to)	Time
Ankit Goyal	Physics	25th Jan	18th Feb	12:00 PM
Pallav Gaur	Physics	25th Jan	13th Feb	2:30 PM
Avinash Singh	Quantitative + Reasoning + Maths	25th Jan	24th Apr	7:30 PM
Vishal Soni	Maths & Physics	1st Feb	24th Apr	5:00 PM
Saket Verma	Physics	15th Feb	3rd March	2:30 PM

Note: 6 days in a week Monday - Saturday

Analytical Aptitude

- Venn Diagram
 - Syllogism
 - Series
 - Coding & Decoding
 - Clock & Calendar
 - Distance & Direction
 - Blood Relation
 - Seating Arrangements
 - Puzzle
- FREE**

Quantitative Aptitude

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

SPM

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Today's Class Agenda



➤ Basic Concept of Probability

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Probability

$$P(E) = \frac{N(E)}{N(S)} = \frac{\text{Total no of ways event } E \text{ can occurs}}{\text{Total no of possible outcomes}}$$

→ Assumes that all outcomes are equally likely

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Definitions related to probability

Sample Space

Event

➤ Compound Event

➤ Mutually Exclusive Events

➤ Independent Events

➤ Dependent Events



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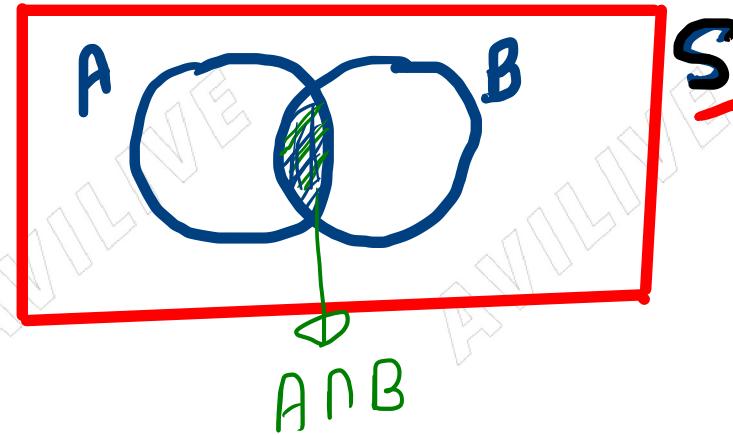

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- 1) In a lottery, there are 10 prizes and 25 blanks. A lottery is drawn at random. What is the probability of getting a prize?
- A) $2/7$ B) $5/7$ C) $1/5$ D) $1/2$

✓ Compound Event

Let A & B be two events defined on a sample space S. We can combine A and B to form other new events which is called as compound Events.



 Event $A \cap B$
which occurs if both A & B

$$P(A \cap B) = P(\text{Both occurs})$$

$$= \frac{\text{Shaded Region}}{\text{Region (Total)}} = \frac{n(A \cap B)}{n(S)}$$

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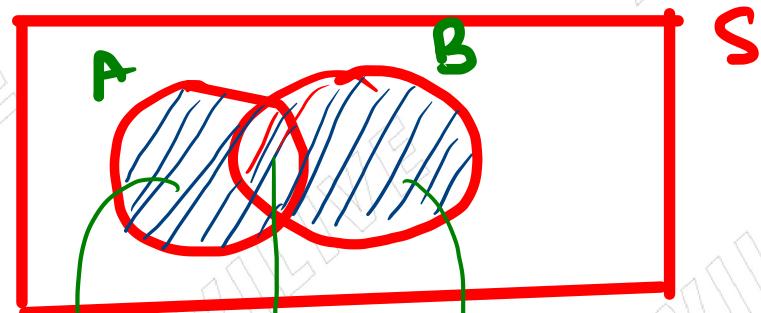
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Compound Event

Let A & B be two events defined on a sample space S. We can combine A and B to form other new events which is called as compound Events.



$$\begin{aligned}n(A) \\ n(B) \\ n(A \cap B)\end{aligned}$$

Event $\rightarrow A \cup B$

(which occurs if either A or B or both
(Atleast one occurs))

$$n(A \cup B) = n(A) + n(B) - n(A \cap B)$$

$$\frac{n(A \cup B)}{n(S)} = \frac{n(A)}{n(S)} + \frac{n(B)}{n(S)} - \frac{n(A \cap B)}{n(S)}$$

$$P(A \cup B) \in [P(A \cup B) = P(A) + P(B) - P(A \cap B)]$$

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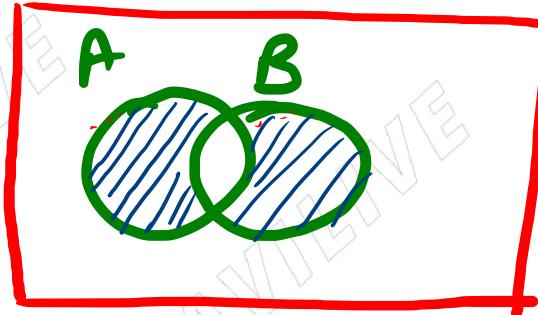
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Compound Event

Let A & B be two events defined on a sample space S. We can combine A and B to form other new events which is called as compound Events.



Event \rightarrow Exactly A or B

$$P(\text{Exactly } A \text{ or } B) = P(A) + P(B) - 2 P(A \cap B)$$

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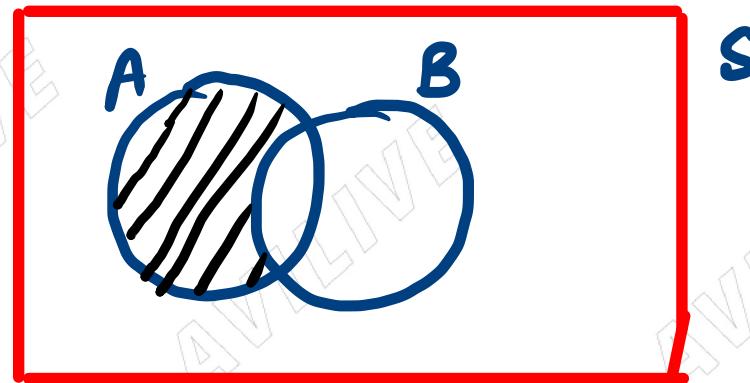
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Compound Event

Let A & B be two events defined on a sample space S. We can combine A and B to form other new events which is called as compound Events.



Event $\rightarrow (A - B) \rightarrow A \cap B^C$

↳ Occurrence of A & not occurrence of B

$$P(A - B) = P(A) - P(A \cap B)$$

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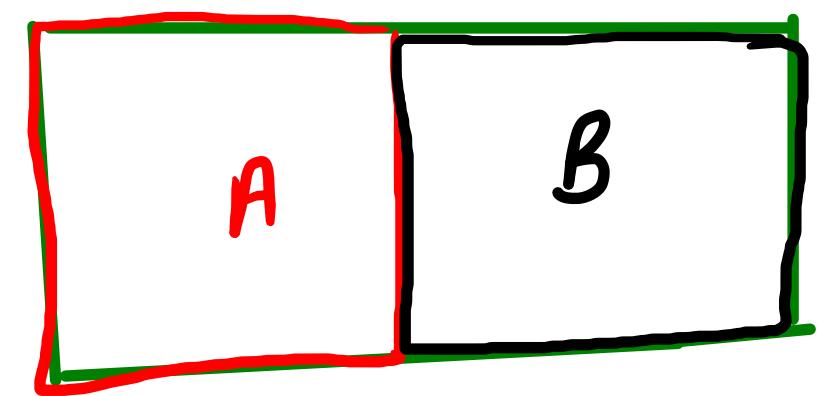
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Experiment

$$\left\{ \begin{array}{l} S = \{1, 2, 3, 4\} \\ E_A = \{1, 2\} \\ E_B = \{3, 4\} \\ \underline{E_{A \cup B}} = \{1, 2, 3, 4\} \end{array} \right.$$

If $\underline{A} \cup \underline{B} = \text{full Sample Space}$



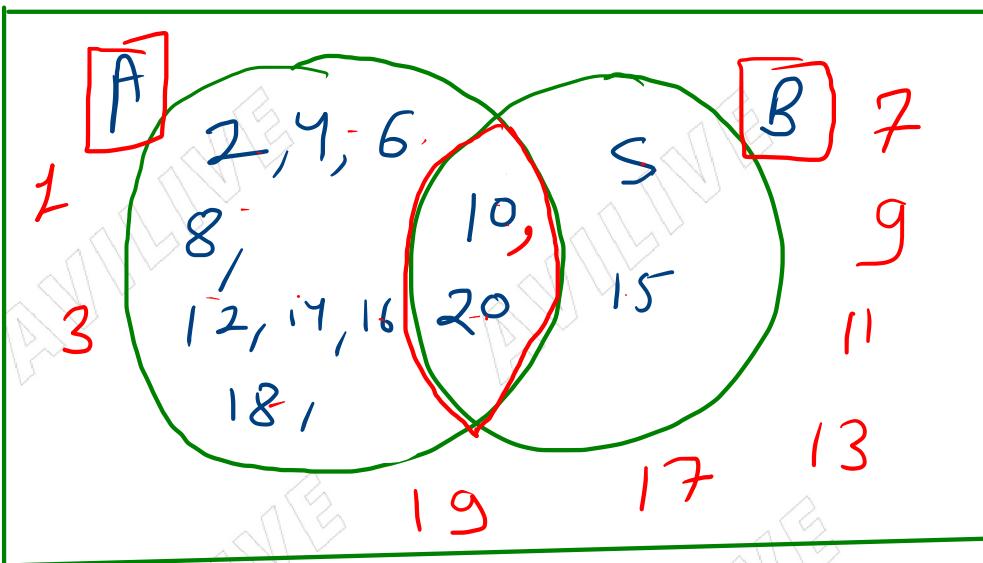
then $A \& B$ are exhaustive Event



1) The probability that a given positive integer lying b/w 1 & 20(both inclusive) is divisible by 2 or 5 is?

A **B**

$$S \rightarrow (1 \text{ to } 20)$$



S

$$\begin{aligned} P(A \text{ or } B) &= P(A) + P(B) - P(A \cap B) \\ &= \frac{10}{20} + \frac{4}{20} - \frac{2}{20} \\ &= \frac{12}{20} = \frac{3}{5} \end{aligned}$$

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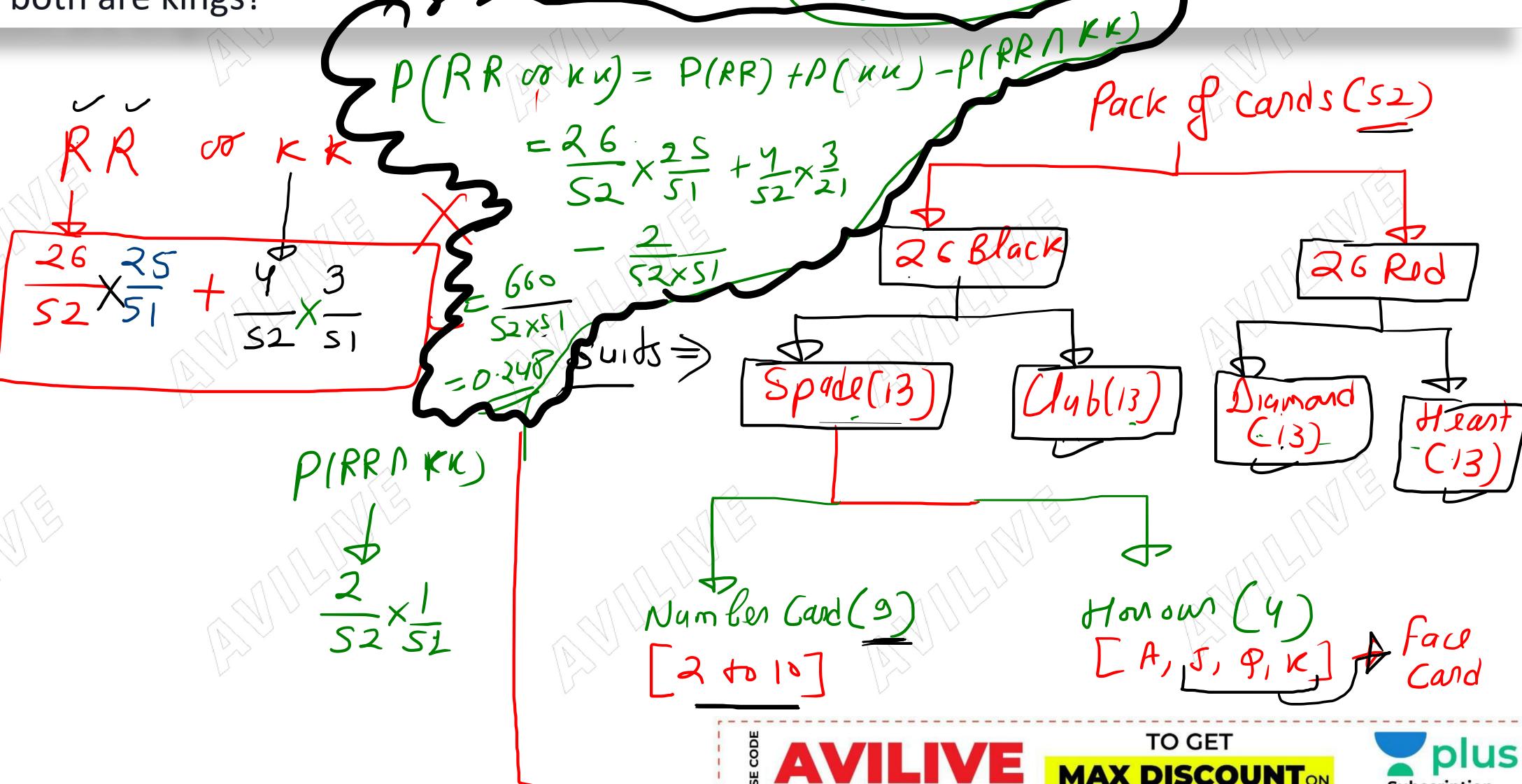
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2) Two cards are drawn from a pack of cards. What is the probability that either both are red or both are kings?

0.248



Mutually Exclusive Event



Two events are mutually exclusive if they cannot occur at the same time (they have no outcomes in common)

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Mutually Exclusive Event



If A and B are mutually exclusive events,

$$P(A \text{ or } B) = P(A \cup B) = P(A) + P(B)$$

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3) A pair of dice is rolled. What is the probability that the sum of the number rolled is either 7 or 11?

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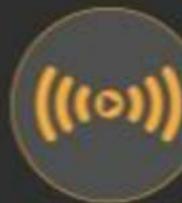


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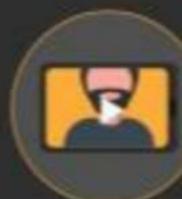
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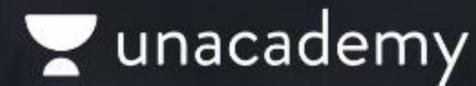
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Aptitude

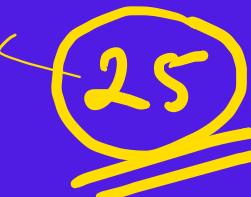
Analytical
Aptitude

Verbal
Aptitude

Spatial
Aptitude



- Venn Diagram
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- Analogy
- Puzzle



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Quantitative Aptitude

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Educator highlights

- Worked at GATE ACADEMY
- Cracked GATE Exam Multiple time
- Lives in Durg, Chhattisgarh, India
- Unacademy Educator since 29th September, 2020

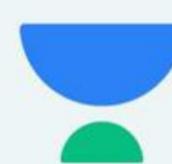
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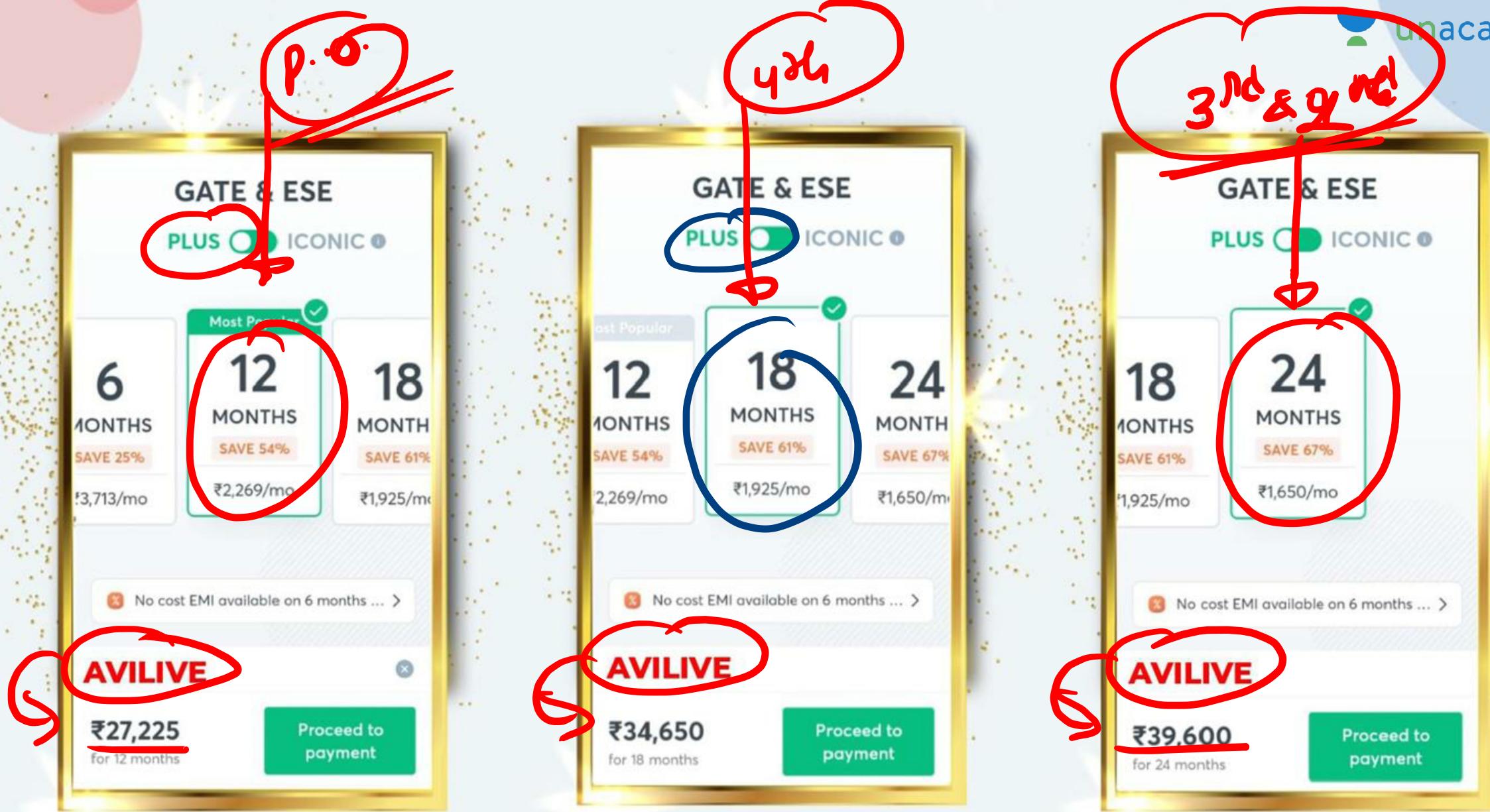
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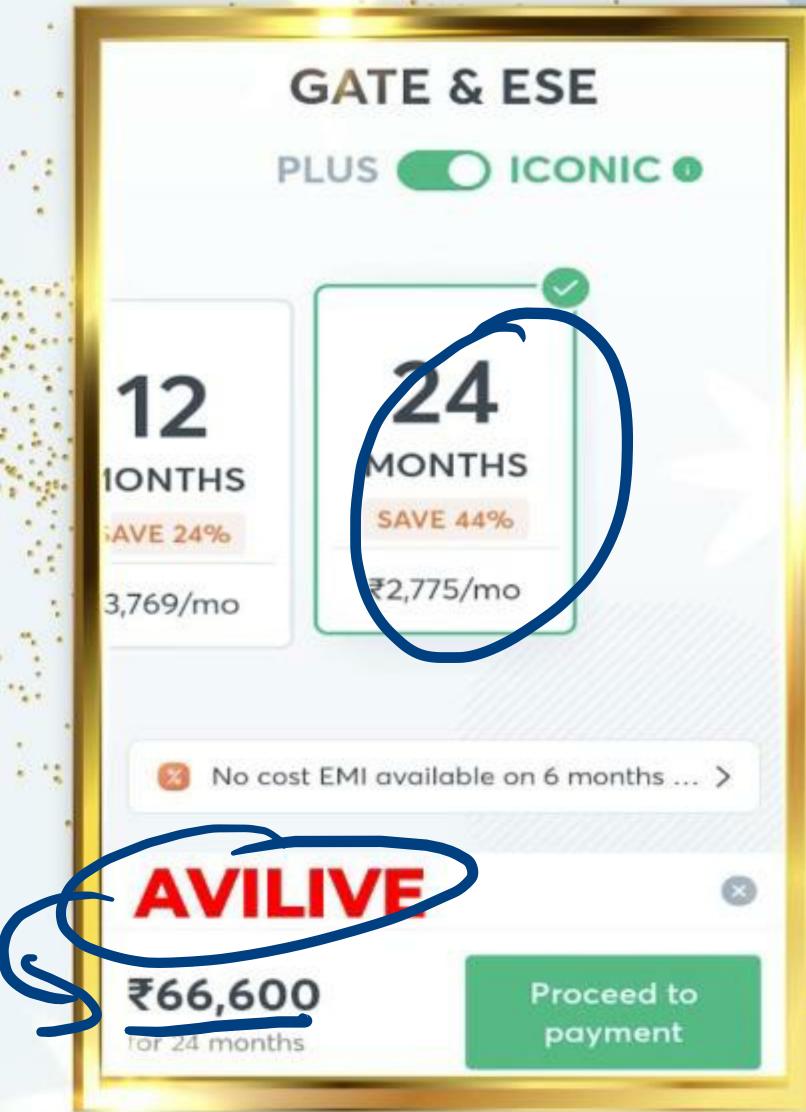
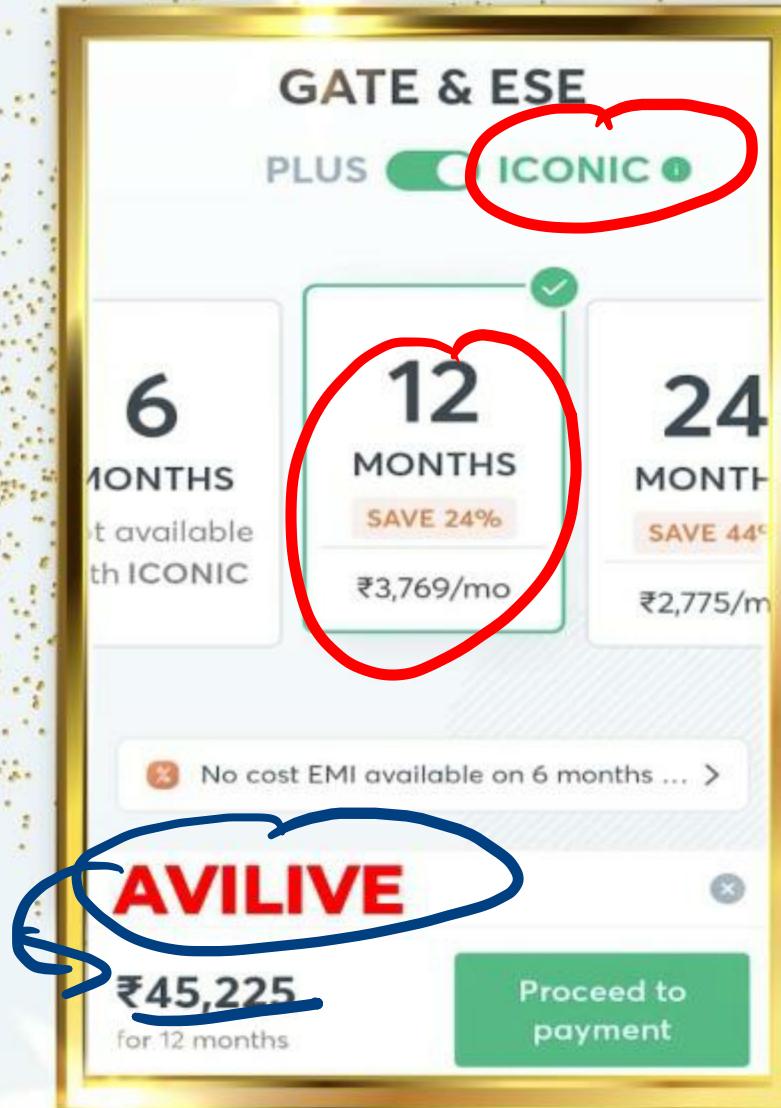
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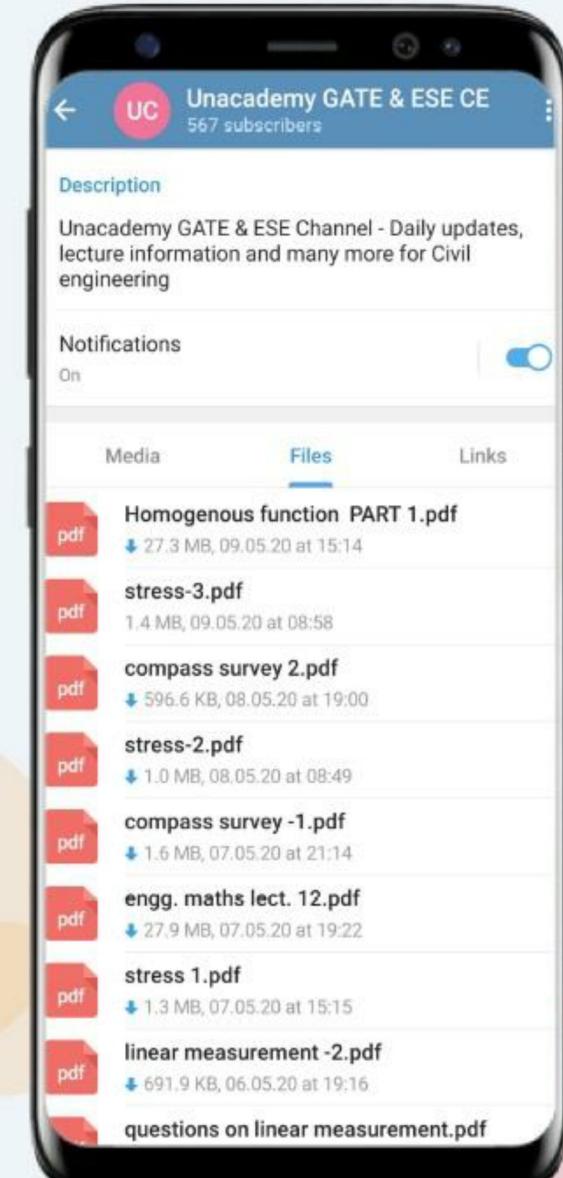
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