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GATE 2021

GENERAL APTITUDE

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{ PROBABILITY-2 }



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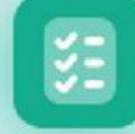
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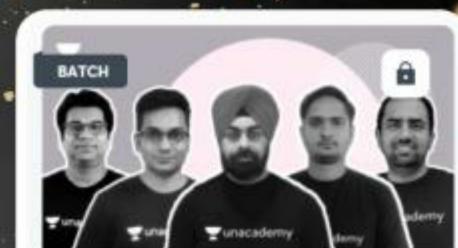
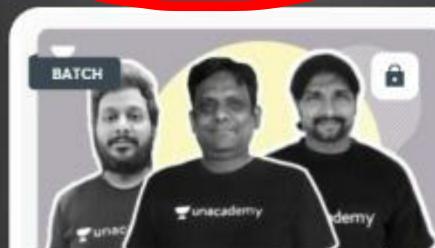
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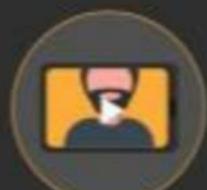
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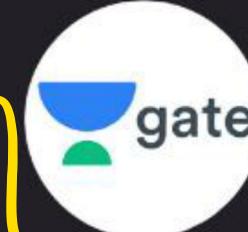
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(All Branches)



Spatial Aptitude



Daily



5 PM



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(Quantitative)

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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
Aptitude

Verbal
Aptitude

Spatial
Aptitude



- Venn Diagram
- Syllogism
- Series
- Analogy
- Puzzle

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

A&E

Tejas Batch (Starting from 25th Jan)

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 April	7:30 PM
Vishal Soni	Maths & Physics	1st Feb	24th April	5:00 PM
Saket Verma	Physics	15th Feb	3rd March	2:30 PM

Pattern

Total 10 Questions

1) Five Question
Each question 1 mark

2) Five Question
Each question 2 mark

GATE 2021

GENERAL APTITUDE

Full Syllabus Test

(Strictly Related to NEW GATE Syllabus)

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5 PM

9 Jan
5 PM

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20 Jan
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Analytical Aptitude

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

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Quantitative Aptitude

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- Percentage
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- 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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Today's Class Agenda



➤ Basic Concept of Probability

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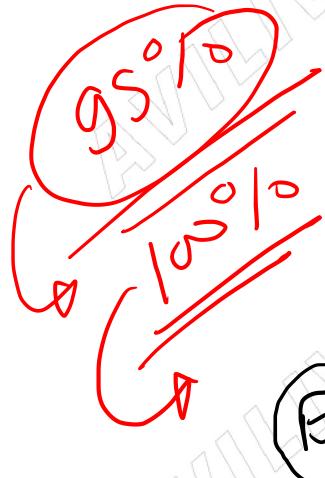
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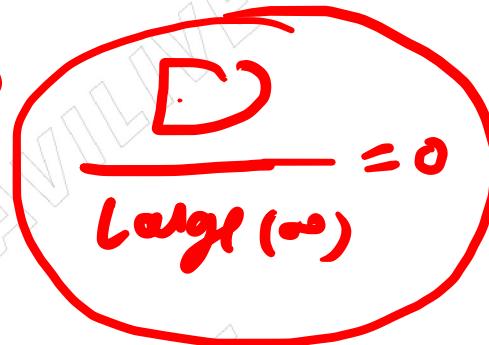
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Probability

→ How likely something is to happen  unacademy



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



① Assumes that all outcomes are equally likely

② Sample Space Finite

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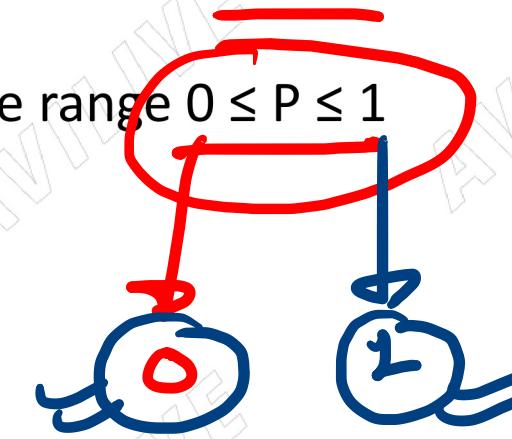
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Probability

- Probability is the chance that something is the case or that an event will occur.
- Probability does not tell exactly what will happen, it is just a guide.
- Probability is represented as a pure number P in the range $0 \leq P \leq 1$

$$P = 20\% = \frac{.2}{100}$$



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Definitions related to probability

Sample Space

Event

- Compound Event
- Mutually Exclusive Events
- Independent Events
- Dependent Events

Experiment

Outcome

Sample Space

Event

Probability

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Sample Space

→ A Sample Space is the set of all possible outcomes of a particular experiments.

Ex

①

Tossing Single coin

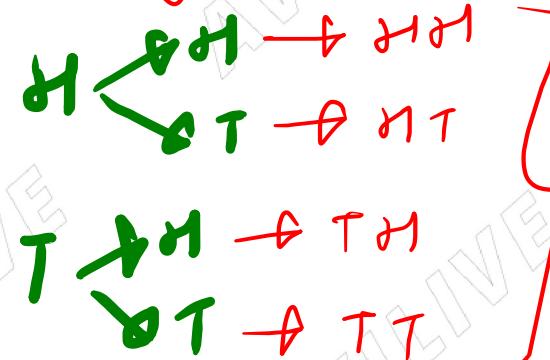
$$S = \{H, T\}$$

set

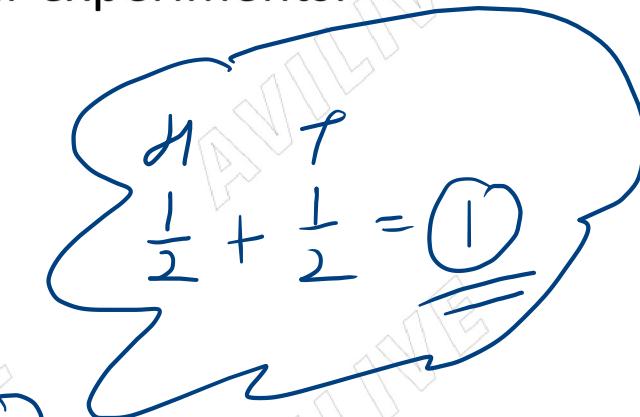
Sample point

②

Tossing two coin = $2 \times 2 = 4$



$$S = \left\{ \frac{HH}{T}, \frac{HT}{T}, \frac{TH}{T}, \frac{TT}{T} \right\}$$
$$\frac{1}{4} + \frac{1}{4} + \frac{1}{4} + \frac{1}{4} = 1$$



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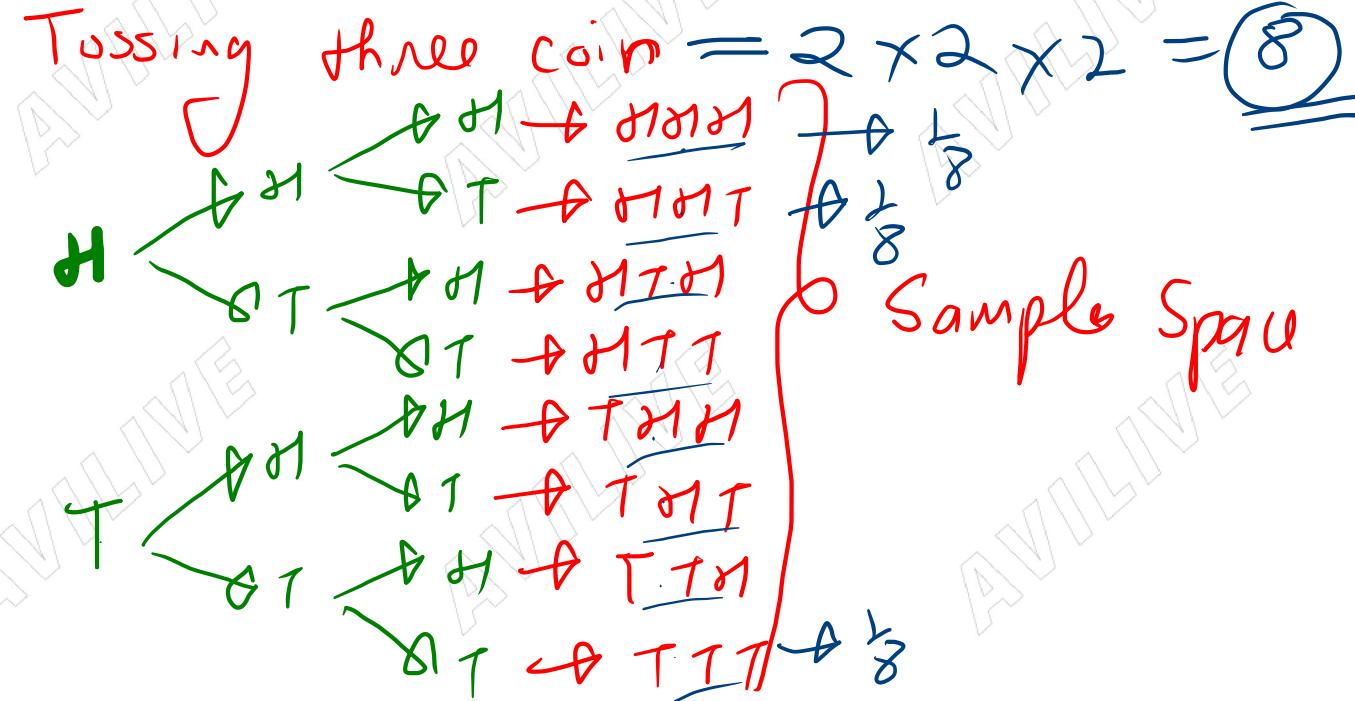
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Sample Space

Cg



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

Cg

Tossing four coin $\rightarrow 2 \times 2 \times 2 \times 2 = 16$

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Sample Space

Q1 Single Dice is rolled

$$S = \{1, 2, 3, 4, 5, 6\}$$

$\frac{1}{6} + \frac{1}{6} + \frac{1}{6} + \frac{1}{6} + \frac{1}{6} + \frac{1}{6} = 1$

Q2 Double Dice is rolled = $6 \times 6 = 36$

$$S = \{(1,1) (1,2) (1,3) (1,4) (1,5) (1,6)$$

$$(2,1) (2,2) (2,3) (2,4) (2,5) (2,6)$$

$$(3,1) (3,2) (3,3) (3,4) (3,5) (3,6)$$

$$(4,1) (4,2) (4,3) (4,4) (4,5) (4,6)$$

$$(5,1) (5,2) (5,3) (5,4) (5,5) (5,6)$$

$$(6,1) (6,2) (6,3) (6,4) (6,5) (6,6)\}$$

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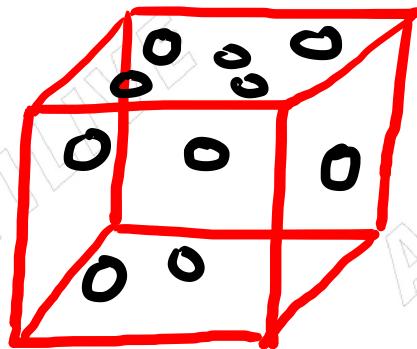
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1) Consider a dice with the property that the probability of a face with n dots showing up is proportional to n . The probability of the face with three dots showing up is $\frac{1}{7}$.



$$\begin{array}{c}
 P \\
 \textcircled{1} \quad \textcircled{2} \quad \textcircled{3} \quad \textcircled{4} \quad \textcircled{5} \quad \textcircled{6} \\
 \downarrow \quad \downarrow \quad \downarrow \quad \downarrow \quad \downarrow \quad \downarrow \\
 P + 2P + 3P + 4P + 5P + 6P = 1
 \end{array}$$

$$21P = 1$$

$$P = \frac{1}{21}$$

$$\begin{aligned}
 3 \text{ dots} &\rightarrow 3P \\
 &= 3 \times \frac{1}{21} = \frac{1}{7}
 \end{aligned}$$

Event

Experiment

↓
outcome

↓
Sample Space

↓
Event

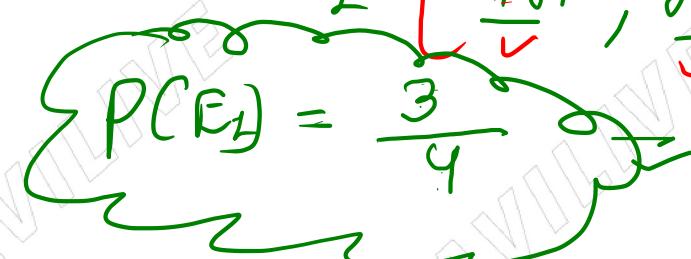
→ It's set of one or more outcome of random experiment is known as event.

Eg Tossing two coin → Experiment ✓

$S = \{H\bar{H}, H\bar{T}, \bar{H}T, \bar{T}\bar{T}\}$ → Sample Space ✓

Event ① → The Event that a head show up will be

$$E_1 = \{H\bar{H}, H\bar{T}, \bar{H}T\}$$



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Event ② → at least two Head

$$E_2 = \{HH\}$$

$$P(E_2) = \frac{1}{4}$$

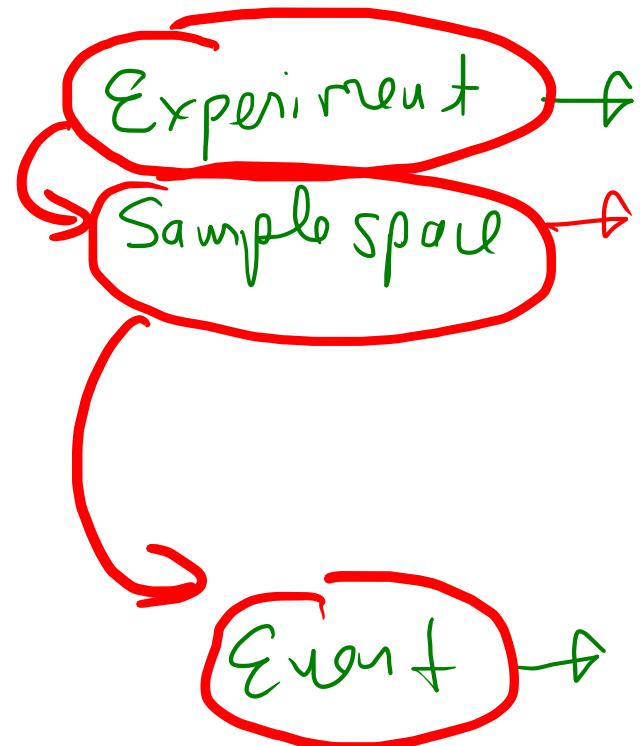
* Event is always subset of the sample space

Complement of Event

$$E_1^C = \{TT\} \rightarrow \text{not happening of } E_1$$

$$P(E_1^C) = \frac{1}{4} \quad [P(E_1) + P(E_1^C) = 1]$$
$$\frac{3}{4} + \frac{1}{4} = 1$$

Ques If three coin are tossed simultaneously, the probability of getting at least one head is.



three coin tossed

$$2 \times 2 \times 2 = 8$$

$S = \{ \text{HHT}, \text{HTH}, \text{THH} \}$

$\text{HHT}, \text{HTH}, \text{THH}$

$E = \{ \text{HHT}, \text{HTH}, \text{THH}, \text{HTT}, \text{TTH} \}$

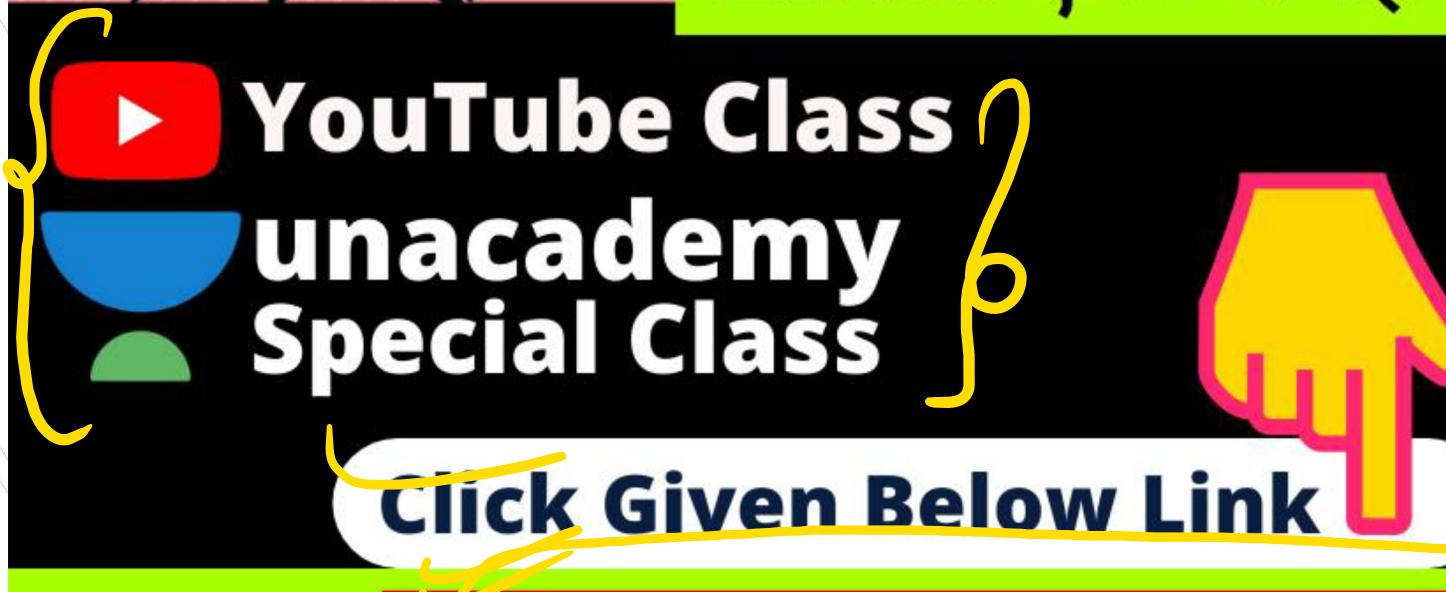
$$E^c = \{ \text{TTT} \} \quad P(E^c) = \frac{1}{8} \quad P(E) = 1 - P(E^c)$$
$$= 1 - \frac{1}{8} = \frac{7}{8}$$

$$P(E) = \frac{7}{8}$$

GATE-2021

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General Aptitude Full Length Live Test - 3

HINDI GENERAL APTITUDE

Most Expected General Aptitude Questions for GATE - Part 10

HINDI GENERAL APTITUDE

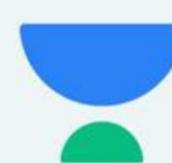
Most Expected General Aptitude Questions for GATE - Part 9

Educator highlights

- ★ Worked at GATE ACADEMY
- ★ Cracked GATE Exam Multiple time
- 📍 Lives in Durg, Chhattisgarh, India
- ⌚ Unacademy Educator since 29th September, 2020
- ⌚ 107,652 live minutes taught in last 30 days

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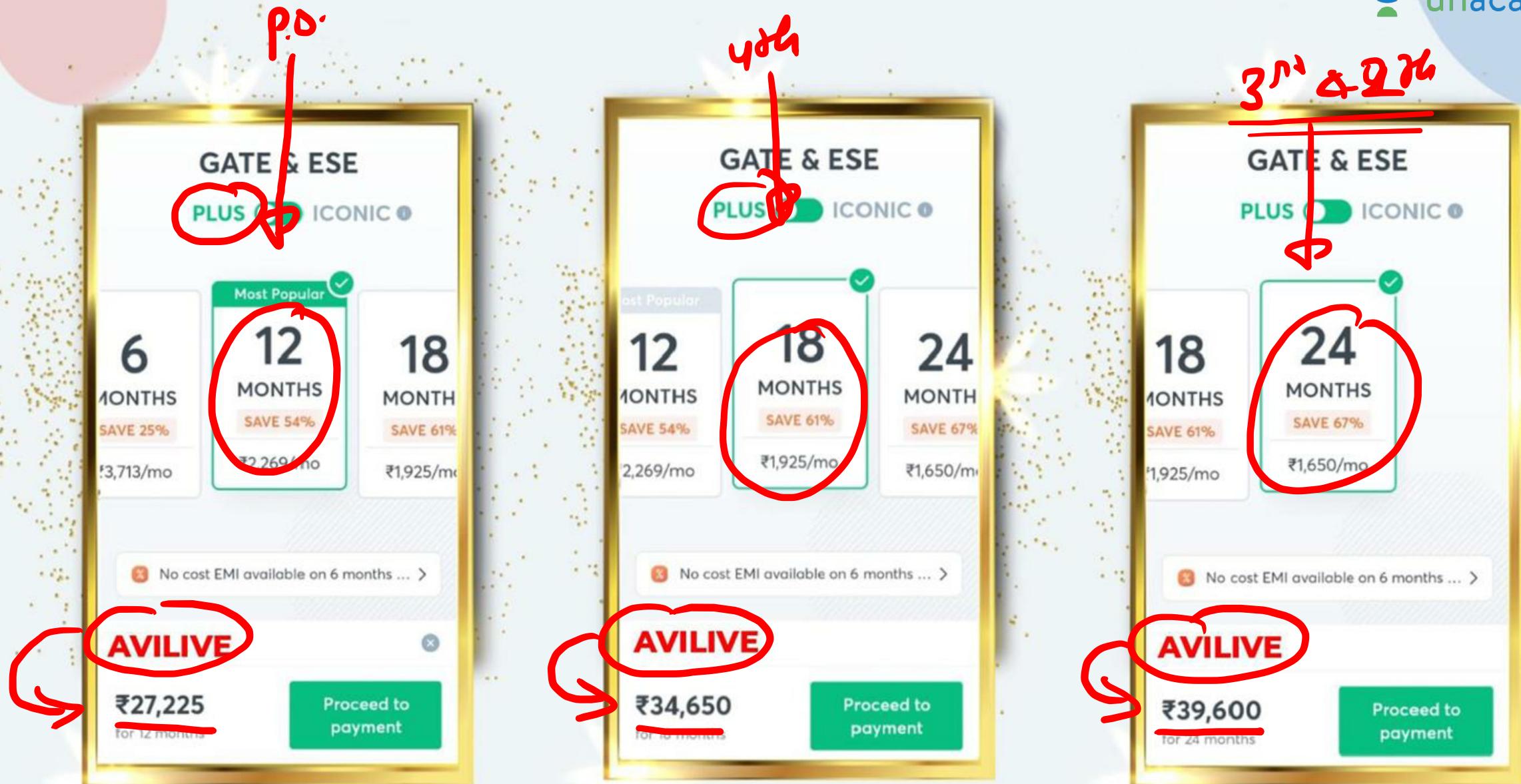
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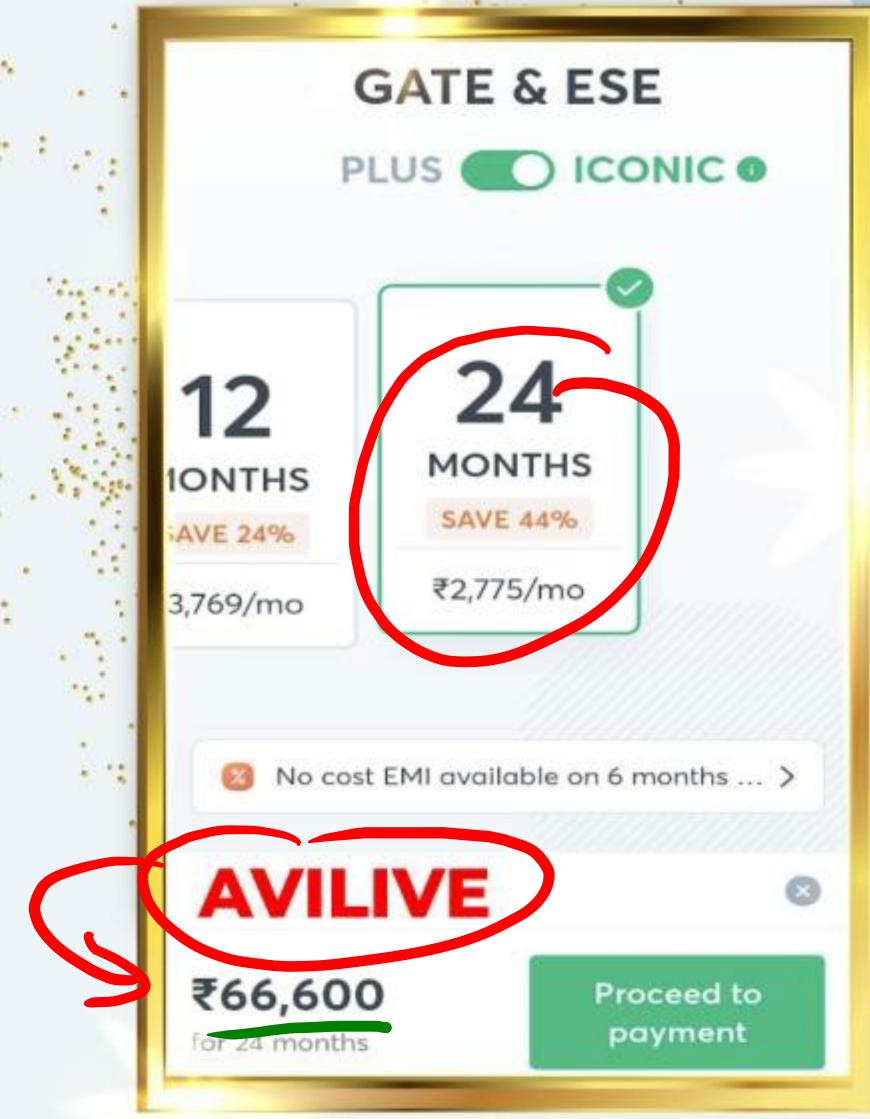
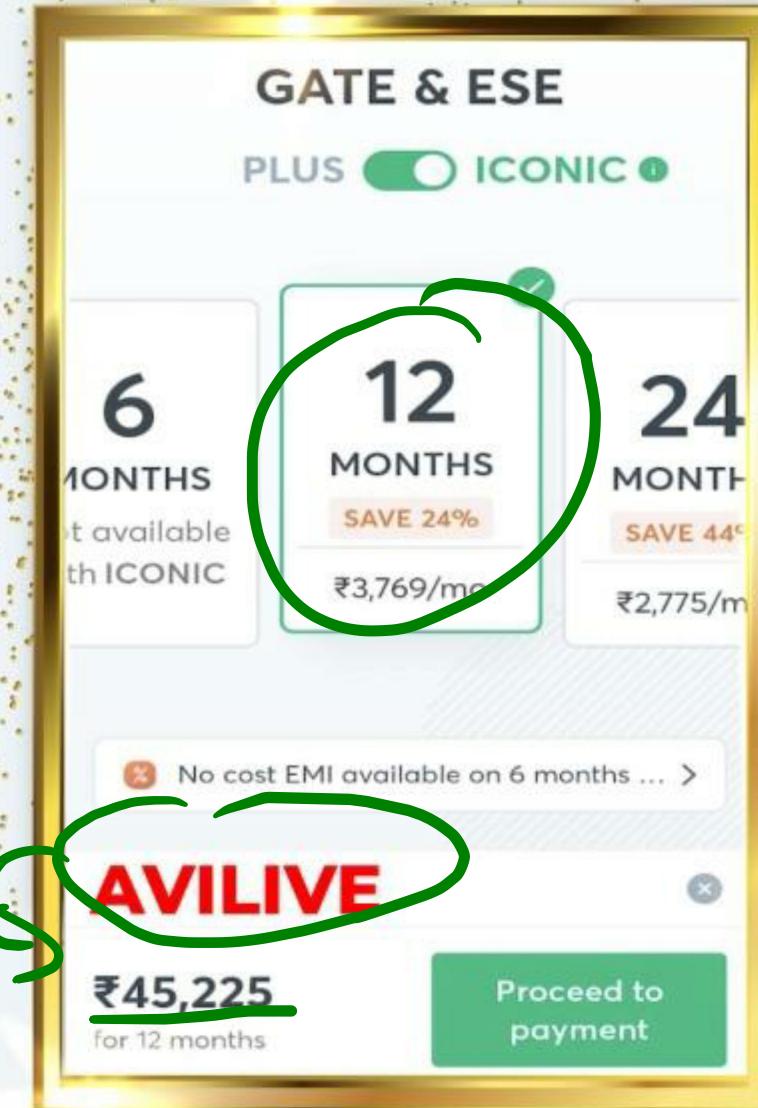


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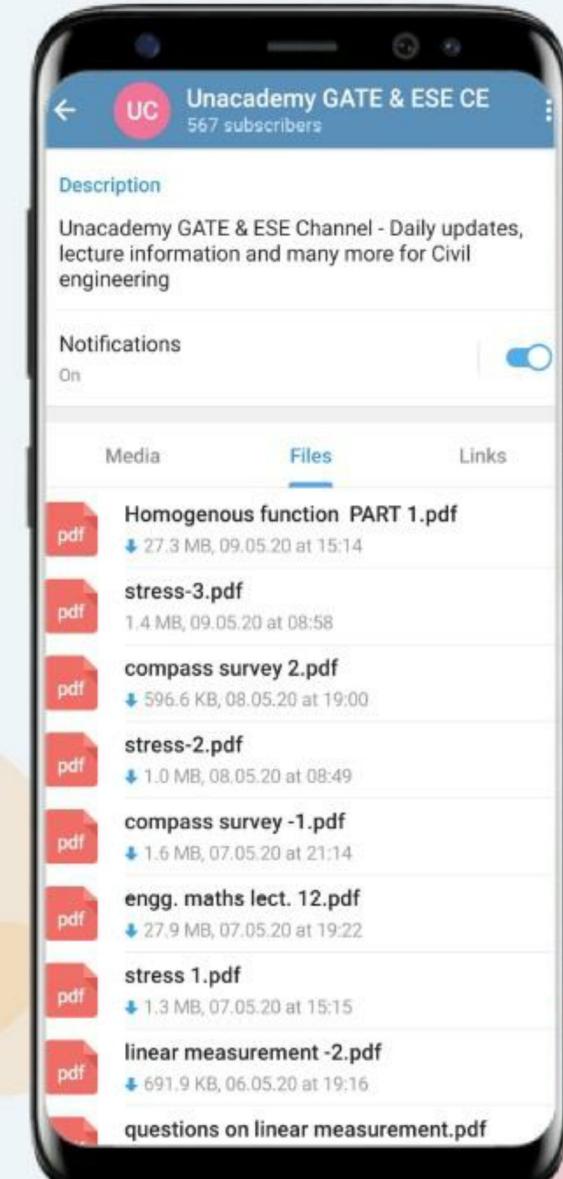
Each plan is preceded by a red circle. Red arrows point from the top circles to the "12 MONTHS" and "18 MONTHS" sections. A red arrow points from the bottom circle to the "24 MONTHS" section. Handwritten red text above the first two circles reads "P.D." and "4th". Above the third circle, handwritten red text reads "3rd & 2nd".

Below the payment plans, each screen contains a message about no cost EMI availability for 6 months and a large red "AVILIVE" button. The total amount for 12 months is ₹27,225, for 18 months it is ₹34,650, and for 24 months it is ₹39,600. Each total is underlined in red. At the bottom of each screen is a green "Proceed to payment" button.





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