CLAT Community

daily QT

SECTIONAL TEST

20 DAYS TO GO FOR CLAT 2027

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OUR RANKERS

1 in every 4 of CLAT Community's students are now placed in Top 5 NLUs.



ALL INDIA RANK **15**

SAHER GOLE



ALL INDIA RANK **17**

PARTHIVA SUSHANTH



ALL INDIA RANK **61**

MIHIKA AGGARWAL



ALL INDIA RANK **79**

SUHIT KENDURKAR



ALL INDIA RANK **86**

RIYA CHAUHAN



ALL INDIA RANK **100**

SHEIKH EHSAAN KHALEELULLAH



ALL INDIA RANK **104**

HRISHIT PODDAR



ALL INDIA RANK **137**

ROHAN YADAV



ALL INDIA RANK **146**

TEJAS ROY



ALL INDIA RANK **147**

ANIRUDDH BAJAJ



ALL INDIA RANK **189**

KABIR WADHWANI



ALL INDIA RANK **263**

CANCHI SISTLA AKSHARA



ALL INDIA RANK **319**

SHIVAM TRIPATHI



ALL INDIA RANK **413**

HARDIK GAUTAM



ALL INDIA RANK **NLSIU**

MANYA BHASKAR



ALL INDIA RANK **NLSIU**

NAMASHRITA GOPINATH



ALL INDIA RANK **NLSIU**

RONIL DHASAL



ALL INDIA RANK **NALSAR**

VEDA RAO



ALL INDIA RANK **NLSIU**

SAMANDAR SINGH



ALL INDIA RANK **NALSAR**

GANJI HAINDAVI



ALL INDIA RANK **NALSAR**

SAHISHNA



ALL INDIA RANK **NLSIU**

PRANAV. S

AND MANY MORE.

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OUR COURSES

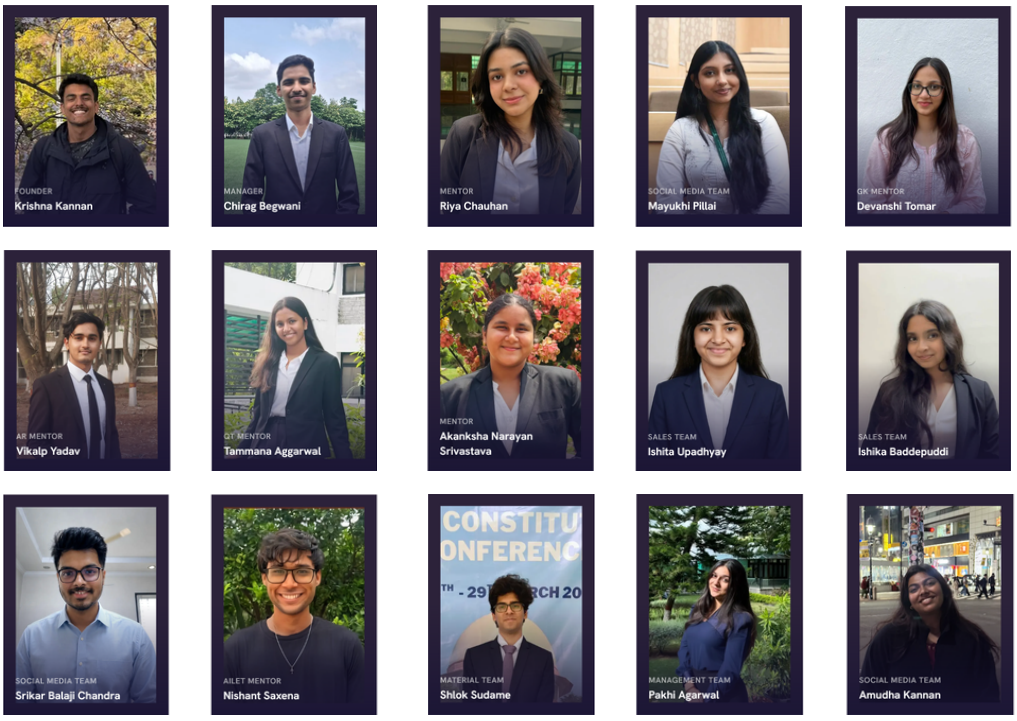








OUR MENTORS



MENTORS' NOTE

Good morning everyone,

If you're reading this, you're already doing something that thousands of CLAT aspirants never do—you've shown up today. That might sound like a small thing, but over the next few months you'll realise that success in CLAT is rarely decided by one brilliant mock or one 12-hour study session. It's decided by the hundreds of ordinary days where you choose to sit down and study even when you don't feel like it.

The entire CLAT Community team is rooting for you. Whenever you're stuck, ask doubts, discuss questions, and make use of the people around you. You don't have to prepare alone. We hope today's material helps you take one more step towards your dream.

Now stop reading this note and get to work. Your future self will thank you for the effort you put in today.

All the best.

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DAILY QT

PASSAGE 1 — GRIDLINE TILES: COUNTING RECTANGLES & SQUARES ON A GRID

Gridline Tiles sells mosaic panels cut from a rectangular board marked with a square grid. A board with four columns and three rows is used as the standard template, and the firm's catalogue counts every rectangle that can be traced along the grid lines, because each such rectangle is a possible tile outline that a customer may order. A rectangle is any region bounded by two horizontal and two vertical grid lines, and its size is chosen by picking the two lines on each side.

Counting rectangles reduces to choosing lines. A grid with four columns has five vertical lines and a grid with three rows has four horizontal lines, so a rectangle is fixed by choosing two of the five vertical lines and two of the four horizontal lines. The firm separates squares from other rectangles, since squares carry a premium price. A square is a rectangle whose width equals its height, and the firm counts the squares of each size separately before subtracting them from the total.

The catalogue also examines larger boards and certain sub-families of rectangles, such as those whose width spans exactly two columns. Staff are reminded that a rectangle of width two can sit in several positions, so every admissible position must be counted once. Unless stated otherwise, every tile outline lies along the grid lines, and no tile may overlap the boundary of the board.

1. The total number of rectangles on a 4-column by 3-row grid is:

(A) 48

(B) 60

(C) 72

(D) 54

2. The number of squares on a 4-column by 3-row grid is:

(A) 20

(B) 18

(C) 22

(D) 24

3. The number of rectangles on a 4-column by 3-row grid that are not squares is:

(A) 36

(B) 44

(C) 40

(D) 42

4. The total number of rectangles on a 5-column by 5-row grid is:

(A) 196

(B) 225

(C) 210

(D) 240

5. The number of squares on a 5-column by 5-row grid is:

(A) 50

(B) 45

(C) 60

(D) 55

6. The number of rectangles on a 4-column by 3-row grid whose width spans exactly two columns is:

(A) 15

(B) 18

(C) 20

(D) 24

PASSAGE 2 — FAIRPLAY CASINO: EXPECTED VALUE, VARIANCE & REPEATED PLAYS

Fairplay Casino runs a simple game in which a player rolls a fair six-sided die once and receives a payout that depends on the result. A roll of six pays Rs 60, a roll of four or five pays Rs 12, and a roll of one, two or three costs the player Rs 6. The casino's analysts measure the game by its expected value, which is the average payout per play when the die is rolled many times, weighted by the probability of each result.

Two further measures matter to the analysts. The first is the variance, which measures how widely the payout spreads around its expected value, and which is computed from the average of the squared payouts minus the square of the expected value. The second is the probability that a single play does not lose money. Analysts also study what happens when a player repeats the game, because the expected values of independent plays add together even though the variance of the total is not simply doubled in the same way.

The casino sets its entry fee so that the expected net gain for the house is positive, but it must also explain the odds clearly to players. Unless stated otherwise, the die is fair, each roll is independent, and a payout of zero is treated as a non-losing result.

7. The expected payout of one play of the game, in rupees, is:

(A) 9

(B) 11

(C) 13

(D) 15

8. The variance of the payout of one play is:

(A) 545

(B) 441

(C) 600

(D) 666

9. The probability that a single play does not lose money is:

(A) 1/3

(B) 1/2

(C) 2/3

(D) 1/6

10. The expected total payout of two independent plays, in rupees, is:

(A) 11

(B) 33

(C) 22

(D) 44

11. If the payout on a roll of six were Rs 12 instead of Rs 60, with all other payouts unchanged, the expected payout would be:

(A) Rs 5

(B) Rs 7

(C) Rs 1

(D) Rs 3

12. A player pays an entry fee of Rs 15 to play once. The player's expected net gain, in rupees, is:

(A) −4

(B) 4

(C) −11

(D) 26



ANSWER KEY

PASSAGE 1 — GRIDLINE TILES (RECTANGLES & SQUARES)

Q1: (B) 60 — Choose 2 of 5 vertical lines and 2 of 4 horizontal lines: $C(5,2) \times C(4,2) = 10 \times 6 = 60$.

Q2: (A) 20 — Squares of side 1: 12; side 2: 6; side 3: 2. Total 20.

Q3: (C) 40 — $60 - 20 = 40$.

Q4: (B) 225 — $C(6,2) \times C(6,2) = 15 \times 15 = 225$.

Q5: (D) 55 — Squares of sides 1 to 5 number $25 + 16 + 9 + 4 + 1 = 55$.

Q6: (B) 18 — Width spanning two columns: 3 horizontal positions. Height: $C(4,2) = 6$ choices. $3 \times 6 = 18$.

PASSAGE 2 — FAIRPLAY CASINO (EXPECTED VALUE)

Q7: (B) 11 — $(1/6)(60) + (2/6)(12) + (3/6)(-6) = 10 + 4 - 3 = 11$.

Q8: (A) 545 — $E[X^2] = (1/6)(3600) + (2/6)(144) + (3/6)(36) = 666$; variance $= 666 - 11^2 = 545$.

Q9: (B) 1/2 — Payouts of zero or more occur on the rolls 4, 5 and 6, which is 3 of 6 outcomes.

Q10: (C) 22 — Expected values add across independent plays: $2 \times 11 = 22$.

Q11: (D) 3 — $(1/6)(12) + (2/6)(12) + (3/6)(-6) = 2 + 4 - 3 = 3$.

Q12: (A) −4 — Expected net gain $= 11 - 15 = -4$.



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