

CLAT Community

daily QT

SECTIONAL TEST

127

DAYS TO GO FOR
CLAT 2027



clatcommunity.com



[CLAT Community](#)



clatcommunity@gmail.com



[CLAT Community](#)



(+91) 7702 832 727



[CLAT Community](#)

OUR RANKERS

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



SAHER GOLE



PARTHIVA SUSHANTH



MIHIKA AGGARWAL



SUHIT KENDURKAR



RIYA CHAUHAN



SHEIKH EHSAN KHALEELULLAH



HRISHIT PODDAR



ROHAN YADAV



TEJAS ROY



ANIRUDDH BAJAJ



KABIR WADHWANI



CANCHI SISTLA AKSHARA



SHIVAM TRIPATHI



HARDIK GAUTAM



MANYA BHASKAR



NAMASHRITA GOPINATH



RONIL DHASAL



VEDA RAO



SAMANDAR SINGH



GANJI HAINDAVI



SAHISHNA



PRANAV. S

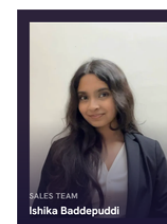
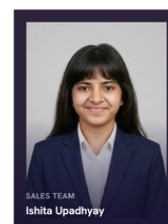
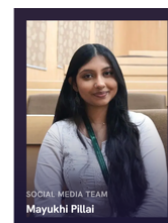
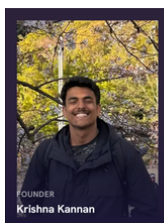
AND
MANY
MORE.

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OUR COURSES



OUR MENTORS



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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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QUANTITATIVE APTITUDE

Passage I

Nutrivite Juice Bar prepares fresh fruit juice blends by mixing different juices in specific proportions to achieve a target taste, sweetness, or cost per litre for each recipe. Some blends combine two juices of different prices to hit a specific price point, while others involve diluting a concentrated juice with water to adjust its sweetness before serving. When demand shifts through the day, the staff sometimes adjusts an already-prepared blend by adding a fresh batch of one ingredient to correct its composition. Because customers often ask for custom ratios, the staff frequently works out how much of each ingredient must be mixed, added, or removed to achieve a desired final composition. Study the following details about today's juice blends, then answer the questions below.

1. Orange juice costing ₹80/litre is mixed with pineapple juice costing ₹120/litre in the ratio 3:2. Find the cost per litre of the resulting blend.

- (A) ₹90
- (B) ₹94
- (C) ₹96
- (D) ₹100

2. In what ratio should juice costing ₹60/litre be mixed with juice costing ₹100/litre to get a blend costing ₹85/litre?

- (A) 3:5
- (B) 5:3
- (C) 2:5
- (D) 5:2

3. A 50-litre mixture of concentrated juice and water contains concentrate and water in the ratio 2:3. Find the quantity of water that must be added to make the ratio of concentrate to water 2:5.

- (A) 15 litres
- (B) 18 litres
- (C) 20 litres

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(D) 22 litres

4. A vessel contains 40 litres of a juice-water mixture in which juice forms 75% of the volume. 10 litres of this mixture is removed and replaced with pure water. Find the percentage of juice in the resulting mixture.

(A) 50%

(B) 56.25%

(C) 60%

(D) 62.5%

5. A vessel contains 60 litres of pure mango juice. 15 litres of the mixture is withdrawn and replaced with water; this process of withdrawing 15 litres and replacing it with water is carried out twice in total. Find the quantity of pure juice left after the second replacement.

(A) 30 litres

(B) 33.75 litres

(C) 36 litres

(D) 40 litres

6. The juice bar mixes three juices costing ₹70/litre, ₹90/litre, and ₹110/litre in the ratio 3:4:3 respectively. Find the average cost per litre of the resulting mixture.

(A) ₹85

(B) ₹88

(C) ₹90

(D) ₹92

Passage II

Metro Rail Transit Authority operates several train lines across the city, each running at different speeds depending on the route and time of day. Because trains frequently cross each other on parallel tracks, pass through stations, or overtake slower trains on the same line, the operations team routinely calculates how long a train takes to cross a platform, a stationary object, or another moving train, based on their lengths and speeds. The authority also monitors journeys where a train's speed changes partway through a route, or where two trains starting from different stations must be scheduled to meet at a specific point. Because

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passenger safety depends on precise timing, all such calculations must account for train length wherever relevant. Study the following details about today's train schedules, then answer the questions below.

7. A train 150 m long is running at a speed of 54 km/h. Find the time it takes to cross a stationary pole.

- (A) 8 seconds
- (B) 9 seconds
- (C) 10 seconds
- (D) 11 seconds

8. A train 200 m long crosses a platform 300 m long in 25 seconds. Find the speed of the train in km/h.

- (A) 64 km/h
- (B) 68 km/h
- (C) 72 km/h
- (D) 76 km/h

9. Two trains of lengths 120 m and 180 m are running in opposite directions at speeds of 54 km/h and 36 km/h respectively. Find the time they take to cross each other.

- (A) 10 seconds
- (B) 12 seconds
- (C) 14 seconds
- (D) 16 seconds

10. A train 250 m long, running at 72 km/h, overtakes another train 200 m long, running at 54 km/h in the same direction. Find the time taken for the faster train to completely cross the slower train.

- (A) 80 seconds
- (B) 85 seconds
- (C) 90 seconds
- (D) 95 seconds

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11. A train travels the first 90 km of its journey at 60 km/h and the remaining 120 km at 80 km/h. Find the average speed for the entire journey.

- (A) 65 km/h
- (B) 68 km/h
- (C) 70 km/h
- (D) 72 km/h

12. Two trains start at the same time from stations 660 km apart and travel towards each other at speeds of 70 km/h and 80 km/h respectively. Find the distance covered by the faster train when they meet.

- (A) 340 km
- (B) 348 km
- (C) 352 km
- (D) 360 km



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ANSWER KEY**Q1.**

Weighted average cost = $(3 \times 80 + 2 \times 120)/(3+2)$.

$$= (240 + 240)/5 = 480/5 = ₹96.$$

Answer → (C) ₹96

Q2.

By the rule of alligation, the required ratio = $(100 - 85) : (85 - 60) = 15 : 25 = 3 : 5$.

Answer → (A) 3:5

Q3.

In 50 litres with concentrate:water = 2:3, concentrate = 20 litres and water = 30 litres.

Since only water is added, concentrate stays at 20 litres. For concentrate:water = 2:5, water needed = $20 \times (5/2) = 50$ litres.

Water to be added = $50 - 30 = 20$ litres.

Answer → (C) 20 litres

Q4.

Initial mixture (40 L, 75% juice): juice = 30 L, water = 10 L.

Removing 10 L of the uniform mixture removes juice = $10 \times (30/40) = 7.5$ L and water = $10 \times (10/40) = 2.5$ L.

Remaining: juice = $30 - 7.5 = 22.5$ L, water = $10 - 2.5 = 7.5$ L. Adding 10 L pure water gives water = $7.5 + 10 = 17.5$ L, total = 40 L.

Percentage of juice = $22.5/40 \times 100 = 56.25\%$.

Answer → (B) 56.25%

Q5.

Using the repeated-replacement formula: juice left = initial volume $\times (1 - \text{removed}/\text{total})^n$.

$$\text{Juice left} = 60 \times (1 - 15/60)^2 = 60 \times (3/4)^2 = 60 \times 9/16 = 33.75 \text{ litres.}$$

Answer → (B) 33.75 litres

Q6.

$$\text{Weighted average cost} = (3 \times 70 + 4 \times 90 + 3 \times 110)/(3+4+3).$$

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$$= (210 + 360 + 330)/10 = 900/10 = ₹90.$$

Answer → (C) ₹90

Q7.

$$\text{Speed} = 54 \text{ km/h} = 54 \times (5/18) = 15 \text{ m/s.}$$

$$\text{Time to cross a stationary pole} = \text{length/speed} = 150/15 = 10 \text{ seconds.}$$

Answer → (C) 10 seconds

Q8.

$$\text{Total distance covered while crossing the platform} = \text{train length} + \text{platform length} = 200 + 300 = 500 \text{ m.}$$

$$\text{Speed} = \text{distance/time} = 500/25 = 20 \text{ m/s} = 20 \times (18/5) = 72 \text{ km/h.}$$

Answer → (C) 72 km/h

Q9.

$$\text{Since the trains move in opposite directions, relative speed} = 54 + 36 = 90 \text{ km/h} = 90 \times (5/18) = 25 \text{ m/s.}$$

$$\text{Total length to be crossed} = 120 + 180 = 300 \text{ m.}$$

$$\text{Time} = 300/25 = 12 \text{ seconds.}$$

Answer → (B) 12 seconds

Q10.

$$\text{Since the trains move in the same direction, relative speed} = 72 - 54 = 18 \text{ km/h} = 18 \times (5/18) = 5 \text{ m/s.}$$

$$\text{Total length to be crossed} = 250 + 200 = 450 \text{ m.}$$

$$\text{Time} = 450/5 = 90 \text{ seconds.}$$

Answer → (C) 90 seconds

Q11.

$$\text{Time for first leg} = 90/60 = 1.5 \text{ hours. Time for second leg} = 120/80 = 1.5 \text{ hours.}$$

$$\text{Total distance} = 90 + 120 = 210 \text{ km. Total time} = 1.5 + 1.5 = 3 \text{ hours.}$$

$$\text{Average speed} = 210/3 = 70 \text{ km/h.}$$

Answer → (C) 70 km/h

Q12.

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Since the trains move towards each other, relative speed = $70+80 = 150$ km/h.

Time to meet = total distance/relative speed = $660/150 = 4.4$ hours.

Distance covered by the faster train = $80 \times 4.4 = 352$ km.

Answer → (C) 352 km



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