

Arithmetic Test - 2

Special class

Unacademy CAT Educators

Name**Saral Nashier****Subject****QUANT & LRDI**

Achievements

- Teaching and mentoring CAT students for 20+ years.
- Scored 100 percentile in QA and 100 percentile in LRDI. Scored overall 99.9+ percentile multiple times.
- Mentored thousands of students and trained more than 100 teachers for CAT.
- Headed the content team of a national level CAT coaching institute.
- Imparted knowledge to thousands of students through various seminars across the country.
- Known for creating 'Saral' solutions for difficult problems.

**USE
CODE****SARAL**



- ❖ Join the [Telegram group](#) in the 'pinned comment' for the test.
- ❖ This test has **22 questions**.
- ❖ Total Duration of the exam is **40 minutes**.
- ❖ You have to attempt all Questions. There is no TITA.
- ❖ Each right answer is worth +3 marks and each wrong answer fetches a penalty of -1.
- ❖ Test Starts at:
- ❖ Test Ends at:





A fruit vendor has five baskets of apples, with individual prices of \$20, \$35, \$40, \$45, and \$70. One day, the price of one basket increases by 16%, while another decreases by 35%. The prices of the remaining three baskets stay the same. If the average price per basket increases by 2%, identify the possible prices of the baskets whose prices did not change.

- A. \$35, \$40, and \$45
- B. \$20, \$35, and \$70
- C. \$20, \$45, and \$70
- D. \$20, \$35, and \$40



A tank, 4 meters in height, has two inlet pipes and two outlet pipes. One outlet pipe is at the tank's bottom, and the other is at a height of 2 meters. The inlet pipes are positioned at heights of 1 meter and 3 meters respectively. Each inlet pipe can fill an empty tank in 5 hours. Each outlet pipe, if located at the bottom, can empty a full tank in 4 hours. If the tank is initially full and both inlet pipes continuously supply water, how long will it take for the tank to be emptied for the first time?

- A. 37 hours 20 minutes
- B. 29 hours
- C. 9 hours 20 minutes
- D. The tank will never be emptied



Calorie counts in each 100 gm of dried fruits A, B, C and D are X, Y, Z and W, respectively. X is 25% less than Y and W is 50% less than Z. X, Y, Z and W are integers and the absolute value of the difference between X and Z is 100 Cal. If X, Y, Z and W add up to 770, find the calorie count of 100 gm of dried D.

- A. 70 Cal
- B. 120 Cal
- C. 60 Cal
- D. 240 Cal



Prabhu has 'Rs. P' with him. He deposited half the amount in his wife's bank account and gave Rs. 500 cash to her. He then deposited one-third of the remaining amount to his son and gave Rs. 250 cash to him. Finally he deposited three-fifth of the remaining amount to his daughter and gave her Rs. 750 cash. He then donated the remaining amount of Rs. 2000 to a trust. Which of the following is not true regarding the initial amount (Rs. P) with Prabhu?

- A. $20000 < P < 22500$
- B. $21000 < P < 23000$
- C. $19500 < P < 22000$
- D. $21000 < P < 23500$



A set of 11 integers has a mean of 19, a mode of 15 (which occurs exactly three times), and a median of 18. What is the minimum possible value of the largest number in the set? (TITA)



In a rotary club, the average funds paid by 'A' male members is 'B' lakhs and the average funds paid by 'B' female members is 'A'. The average fund of everyone, including the 62 lakhs fund paid by the chairman (assume he's not a member of the club) is $A + B$. If A and B are in integer lakhs, find the possible numerical value of $A + B$

- A. 8
- B. 10
- C. 12
- D. 14



Avra goes to fruit market to purchase apple, banana and mango. Fruits are sold at fixed rate per piece. Avra purchases 9 apples, 25 bananas, and 4 mangoes. Had he bought 4 more bananas instead of buying 4 mangoes, he could have reduced his expenditure by 26%. However, had he bought 9 more bananas instead of buying 9 apples, he could have reduced his expenditure by 36%. How much the expenditure would reduce in percentage if he had bought 38 bananas only?

- A. 61%
- B. 62%
- C. 63%
- D. 64%



In which of the following ratios should three varieties of Tea powder A, B, and C at the rate Rs. 220, Rs. 240, and Rs. 280 per kg be mixed to come up with a mixture worth Rs. 250 per kg?

- A. 2:3:3
- B. 3:6:4
- C. 2:6:5
- D. 5:3:4



Two friends — Prakash and Arpit — started running simultaneously from a point P in the same direction along a straight running track. The ratio of the speeds of Prakash and Arpit was 2:5. Two hours later, Arpit turned back and started running backwards at one-fifth of his original speed. He met Prakash at a distance of 10 km from the point P. What was Prakash's speed?

- A. 1.25 km/h
- B. 2.5 km/h
- C. 3.75 km/h
- D. 6.25 km/h



A shopkeeper marks up the price of an article by 156% above its cost price. He then offers two successive equal discounts of $d\%$ each on the marked price. If his overall profit is at least 44% on the cost price, then the maximum value of d (in percent) is ____ (TITA).



An elevator has a maximum permitted load of 750 kg. The first three people to enter weigh 83 kg, 72 kg, and 65 kg, in that order. After these three, every subsequent passenger weighs between 48 kg and 95 kg inclusive. In addition, the weight difference between any two consecutive passengers may not exceed 30 kg. Passengers are admitted one at a time. The elevator stops taking people when adding any further person would cause the total weight to exceed 750 kg. What is the maximum number of people the elevator can carry in total? (TITA)



Anika took a semester examination in six subjects, each with a maximum score of 50 marks. Her scores were in the ratio 8:9:10:13:14:15. She did not achieve 50% of the total possible marks across all subjects. Assuming she received whole-number scores in each subject, what is the minimum number of additional marks Anika needs to reach 50% of the total marks?

- A. 81
- B. 12
- C. 57
- D. 18



A group of men can complete a work in a certain number of days. The entire group started the work. However, exactly after 16 days, one-third of the group left. To complete the remaining work, the rest of the group took as many days as the entire group would have taken to complete the entire work. Find the total time (in days) that would have been required to complete the entire work if one-fourth of the group had left after working for exactly 21 days.

- A. 52
- B. 66
- C. 36
- D. 57



Three vessels, P, Q, and R, contain a solution of water and alcohol. The ratios of water and alcohol in vessel P and vessel Q are 2:3 and 1:4, respectively. After combining Q and R in the ratio 1:2, the resulting mixture contains the water and alcohol in the ratio 4:11. Find the percentage of water in a mixture that has P, Q, and R combined in a ratio of 3:5:2.

- A. 28
- B. 24
- C. 27
- D. 15



A sum of money is deposited at a certain rate of compound interest. If simple interest instead of compound interest was reckoned, then the interest for the first two years will be ₹110 less, and for the first three years, it will be ₹335.5 less. Calculate the simple interest on the same principal for 5 years at the same annual rate of interest.

- A. ₹11000
- B. ₹16500
- C. ₹33550
- D. ₹3300



In a circular race of 10 km over a track of length 600 m, P and Q started running simultaneously from point X with speeds of 60 m/s and 20 m/s, respectively. How many times does P overtake Q at a point Y, which is diametrically opposite to point X?

- A. 6
- B. 4
- C. 5
- D. 3



Motorboats regularly travel back and forth between Saltlake and Diamond Harbour. The river current flows from Saltlake toward Diamond Harbour. The time taken by a boat to travel from Saltlake to Diamond Harbour is half the time taken to travel in the reverse direction. The distance between the two locations is 40 km, and the boat completes one round trip in 120 minutes. If the speed of the river current suddenly doubles while the boat's speed in still water remains the same, how many minutes will the boat now take to complete one round trip? (Assume the boat starts its return journey immediately upon reaching Diamond Harbour.)

- A. 150 minutes
- B. 192 minutes
- C. 216 minutes
- D. The boat cannot return because the current is faster than the boat



In a circular track of 320 m, Amit and Naman started running simultaneously from the point. The time taken by Amit and Naman to complete a round are 160 seconds and 200 seconds, respectively. After how many seconds will Amit overtake Naman for the fifth time?

- A. 4000
- B. 3200
- C. 4500
- D. 3600



Saral normally took 12 hours to drive from city A to city B. Today his car developed some technical glitch at point C, between A and B. After fixing the glitch in 15 min, he drove at a speed 20% more than the normal speed. He reached the destination 15 minutes earlier than the normal time. The ratio of the distances AC and CB is

- A. 3 : 1
- B. 1 : 3
- C. 1 : 2
- D. 2 : 1



The ratio of the selling prices of two products X and Y is 4 : 3. The ratio of their profit percentages is 2 : 1. what is the ratio of the cost prices of X and Y?

- A. 1 : 1
- B. 2 : 1
- C. 8 : 9
- D. Cannot be determined



Mrs. Gupta is a teacher at Navodaya School. She needs to indent for chalks to last the entire 1 academic year comprising 175 working days. When a chalk reduces to $\frac{1}{6}$ th of its original length, it gets too small for her to hold and hence, she keeps it aside. Later, she joins 6 such pieces to make a new chalkstick of the same length as the original chalksticks and then uses the new chalkstick. If she uses $\frac{5}{6}$ th of one chalkstick per day, what is the minimum number of chalksticks that she must indent for?

- A. 150
- B. 148
- C. 144
- D. 146



Five cows can graze a field in 5 days. Seven cows can do the same in 3 days. In how many days can two cows graze the field? (Assume that grass grows at a uniform rate in the field.)

- A. 2
- B. 3
- C. 4
- D. They cannot graze ever



Thank You

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