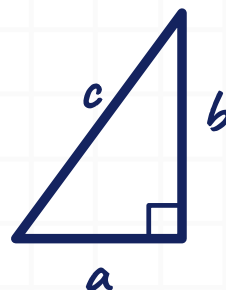
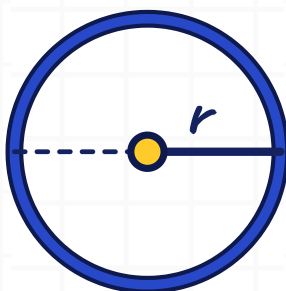


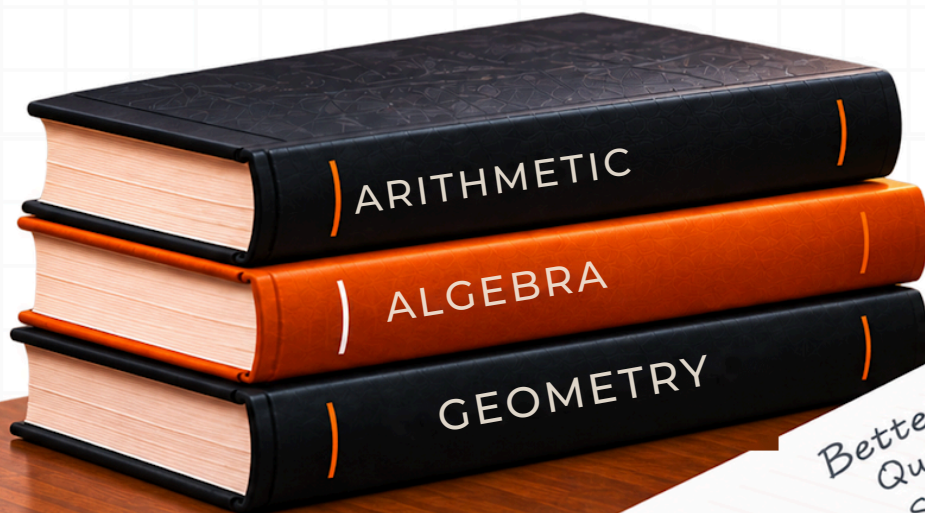
CAT PYQ

Arithmetic

$$a^2 + b^2 = c^2$$



$$D = S \times T$$



Better
Questions
Stronger
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Brighter Future

363 Questions

Quantitative Aptitude

Years: 1990-2025

General Instructions

- (i) This collection contains **363 Quantitative Aptitude** questions classified under **Arithmetic**, following the supplied CD PYQ sheet.
- (ii) **Coverage:** CAT 1990-2025. Questions are grouped by their source year and sitting, with continuous numbering from **1 to 363**.
- (iii) This collection has **283 multiple choice questions (MCQs)** and **80 Type In The Answer (TITA) questions**. Read every option before choosing the answer. Enter a response for questions marked "Type in the answer."
- (iv) All required shared passages and data sets for the selected questions are included. Blue range labels refer to the question numbers **in this collection**. Read the full passage, chart, table or conditions before answering.
- (v) Each question carries its original year or exam date, sitting where available, and source question number. References distinguish the two CAT 2003 sittings.
- (vi) Use this collection for practice. Follow the timing and marking scheme of the original sitting when attempting a timed exercise.
- (vii) Answer keys and solutions are not included. Passages and questions may continue onto the following page.

CAT 2025 Slot 1 - Questions 1-8

1. Shruti travels a distance of 224 km in four parts for a total travel time of 3 hours. Her speeds in these four parts follow an arithmetic progression, and the corresponding time taken to cover these four parts follow another arithmetic progression. If she travels at a speed of 960 meters per minute for 30 minutes to cover the first part, then the distance, in meters, she travels in the fourth part is

30 Nov 2025, Slot 1, Q48

- (A) 76800 (B) 112000
(C) 96000 (D) 86400

2. At a certain simple rate of interest, a given sum amounts to Rs 13920 in 3 years, and to Rs 18960 in 6 years and 6 months. If the same given sum had been invested for 2 years at the same rate as before but with interest compounded every 6 months, then the total interest earned, in rupees, would have been nearest to

30 Nov 2025, Slot 1, Q55

- (A) 3221 (B) 3180
(C) 3150 (D) 3096

3. A container holds 200 litres of a solution of acid and water, having 30% acid by volume. Atul replaces 20% of this solution with water, then replaces 10% of the resulting solution with acid, and finally replaces 15% of the solution thus obtained, with water. The percentage of acid by volume in the final solution obtained after these three replacements, is nearest to

30 Nov 2025, Slot 1, Q56

- (A) 23 (B) 25
(C) 29 (D) 27

4. In a class, there were more than 10 boys and a certain number of girls. After 40% of the girls and 60% of the boys left the class, the remaining number of girls was 8 more than the remaining number of boys. Then, the minimum possible number of students initially in the class was

30 Nov 2025, Slot 1, Q57

Type in the answer.

5. Arun, Varun and Tarun, if working alone, can complete a task in 24, 21, and 15 days, respectively. They charge Rs 2160, Rs 2400, and Rs 2160 per day, respectively, even if they are employed for a partial day. On any given day, any of the workers may or may not be employed to work. If the task needs to be completed in 10 days or less, then the minimum possible amount, in rupees, required to be paid for the entire task is

30 Nov 2025, Slot 1, Q60

- (A) 38400 (B) 38880
(C) 34400 (D) 47040

6. Kamala divided her investment of Rs 100000 between stocks, bonds, and gold. Her investment in bonds was 25% of her investment in gold. With annual returns of 10%, 6%, 8% on stocks, bonds, and gold, respectively, she gained a total amount of Rs 8200 in one year. The amount,

in rupees, that she gained from the bonds, was

30 Nov 2025, Slot 1, Q61

Type in the answer.

7. The ratio of the number of students in the morning shift and afternoon shift of a school was 13 : 9. After 21 students moved from the morning shift to the afternoon shift, this ratio became 19 : 14. Next, some new students joined the morning and afternoon shifts in the ratio 3 : 8 and then the ratio of the number of students in the morning shift and the afternoon shift became 5 : 4. The number of new students who joined is

30 Nov 2025, Slot 1, Q65

- | | |
|---------|--------|
| (A) 110 | (B) 88 |
| (C) 121 | (D) 99 |
-

8. A shopkeeper offers a discount of 22% on the marked price of each chair, and gives 13 chairs to a customer for the discounted price of 12 chairs to earn a profit of 26% on the transaction. If the cost price of each chair is Rs 100, then the marked price, in rupees, of each chair is

30 Nov 2025, Slot 1, Q68

Type in the answer.

CAT 2025 Slot 2 - Questions 9-16

9. The average number of copies of a book sold per day by a shopkeeper is 60 in the initial seven days and 63 in the initial eight days, after the book launch. On the ninth day, she sells 11 copies less than the eighth day, and the average number of copies sold per day from second day to ninth day becomes 66. The number of copies sold on the first day of the book launch is

30 Nov 2025, Slot 2, Q48

Type in the answer.

10. An item with a cost price of Rs. 1650 is sold at a certain discount on a fixed marked price to earn a profit of 20% on the cost price. If the discount was doubled, the profit would have been Rs. 110. The rate of discount, in percentage, at which the profit percentage would be equal to the rate of discount, is nearest to

30 Nov 2025, Slot 2, Q50

- (A) 16 (B) 18
(C) 14 (D) 12

11. Rita and Sneha can row a boat at 5 km/h and 6 km/h in still water, respectively. In a river flowing with a constant velocity, Sneha takes 48 minutes more to row 14 km upstream than to row the same distance downstream. If Rita starts from a certain location in the river, and returns downstream to the same location, taking a total of 100 minutes, then the total distance, in km, Rita will cover is

30 Nov 2025, Slot 2, Q55

Type in the answer.

12. A loan of Rs 1000 is fully repaid by two installments of Rs 530 and Rs 594, paid at the end of first and second year, respectively. If the interest is compounded annually, then the rate of interest, in percentage, is

30 Nov 2025, Slot 2, Q58

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

13. The ratio of expenditures of Lakshmi and Meenakshi is 2 : 3, and the ratio of income of Lakshmi to expenditure of Meenakshi is 6 : 7. If excess of income over expenditure is saved by Lakshmi and Meenakshi, and the ratio of their savings is 4 : 9, then the ratio of their incomes is

30 Nov 2025, Slot 2, Q63

- (A) 3:5 (B) 5:6
(C) 2:1 (D) 7:8

14. A mixture of coffee and cocoa, 16% of which is coffee, costs Rs 240 per kg. Another mixture of coffee and cocoa, of which 36% is coffee, costs Rs 320 per kg. If a new mixture of coffee and cocoa costs Rs 376 per kg, then the quantity, in kg, of coffee in 10 kg of this new mixture is

- (A) 5 (B) 4
(C) 2.5 (D) 6
-

15. Ankita is twice as efficient as Bipin, while Bipin is twice as efficient as Chandan. All three of them start together on a job, and Bipin leaves the job after 20 days. If the job got completed in 60 days, the number of days needed by Chandan to complete the job alone, is

30 Nov 2025, Slot 2, Q67

Type in the answer.

16. A certain amount of money was divided among Pinu, Meena, Rinu and Seema. Pinu received 20% of the total amount and Meena received 40% of the remaining amount. If Seema received 20% less than Pinu, the ratio of the amounts received by Pinu and Rinu is

30 Nov 2025, Slot 2, Q68

- (A) 2:1 (B) 1:2
(C) 5:8 (D) 8:5
-

CAT 2025 Slot 3 - Questions 17-24

17. The monthly sales of a product from January to April were 120, 135, 150 and 165 units, respectively. The cost price of the product was Rs. 240 per unit, and a fixed marked price was used for the product in all the four months. Discounts of 20%, 10% and 5% were given on the marked price per unit in January, February and March, respectively, while no discounts were given in April. If the total profit from January to April was Rs. 138825, then the marked price per unit, in rupees, was

30 Nov 2025, Slot 3, Q47

- (A) 520 (B) 525
(C) 510 (D) 515

18. Teams A, B, and C consist of five, eight, and ten members, respectively, such that every member within a team is equally productive. Working separately, teams A, B, and C can complete a certain job in 40 hours, 50 hours, and 4 hours, respectively. Two members from team A, three members from team B, and one member from team C together start the job, and the member from team C leaves after 23 hours. The number of additional member(s) from team B, that would be required to replace the member from team C, to finish the job in the next one hour, is

30 Nov 2025, Slot 3, Q48

- (A) 4 (B) 2
(C) 1 (D) 3

19. Ankita walks from A to C through B, and runs back through the same route at a speed that is 40% more than her walking speed. She takes exactly 3 hours 30 minutes to walk from B to C as well as to run from B to A. The total time, in minutes, she would take to walk from A to B and run from B to C, is

30 Nov 2025, Slot 3, Q51

Type in the answer.

20. Rahul starts on his journey at 5 pm at a constant speed so that he reaches his destination at 11 pm the same day. However, on his way, he stops for 20 minutes, and after that, increases his speed by 3 km per hour to reach on time. If he had stopped for 10 minutes more, he would have had to increase his speed by 5 km per hour to reach on time. His initial speed, in km per hour, was

30 Nov 2025, Slot 3, Q53

- (A) 12 (B) 15
(C) 18 (D) 20

21. The rate of water flow through three pipes A, B and C are in the ratio 4 : 9 : 36. An empty tank can be filled up completely by pipe A in 15 hours. If all the three pipes are used simultaneously to fill up this empty tank, the time, in minutes, required to fill up the entire tank completely is nearest to

30 Nov 2025, Slot 3, Q54

- (A) 73 (B) 78
(C) 76 (D) 71

22. The average salary of 5 managers and 25 engineers in a company is 60000 rupees. If each of the managers received 20% salary increase while the salary of the engineers remained unchanged, the

average salary of all 30 employees would have increased by 5%. The average salary, in rupees, of the engineers is

30 Nov 2025, Slot 3, Q62

- (A) 45000 (B) 50000
(C) 54000 (D) 40000
-

23. Vessels A and B contain 60 litres of alcohol and 60 litres of water, respectively. A certain volume is taken out from A and poured into B. After stirring, the same volume is taken out from B and poured into A. If the resultant ratio of alcohol and water in A is 15 : 4, then the volume, in litres, initially taken out from A is

30 Nov 2025, Slot 3, Q66

Type in the answer.

24. The ratio of the number of coins in boxes A and B was 17:7. After 108 coins were shifted from box A to box B, this ratio became 37:20. The number of coins that needs to be shifted further from A to B, to make this ratio 1:1, is

30 Nov 2025, Slot 3, Q67

Type in the answer.

CAT 2024 Slot 1 - Questions 25-32

25. Renu would take 15 days working 4 hours per day to complete a certain task whereas Seema would take 8 days working 5 hours per day to complete the same task. They decide to work together to complete this task. Seema agrees to work for double the number of hours per day as Renu, while Renu agrees to work for double the number of days as Seema. If Renu works 2 hours per day, then the number of days Seema will work, is

24 Nov 2024, Slot 1, Q51

Type in the answer.

26. In September, the incomes of Kamal, Amal and Vimal are in the ratio 8 : 6 : 5. They rent a house together, and Kamal pays 15%, Amal pays 12% and Vimal pays 18% of their respective incomes to cover the total house rent in that month. In October, the house rent remains unchanged while their incomes increase by 10%, 12% and 15%, respectively. In October, the percentage of their total income that will be paid as house rent, is nearest to

24 Nov 2024, Slot 1, Q55

- (A) 15.18 (B) 13.26
(C) 14.84 (D) 12.75

27. The selling price of a product is fixed to ensure 40% profit. If the product had cost 40% less and had been sold for 5 rupees less, then the resulting profit would have been 50%. The original selling price, in rupees, of the product is

24 Nov 2024, Slot 1, Q60

- (A) 15 (B) 14
(C) 10 (D) 20

28. A glass is filled with milk. Two-thirds of its content is poured out and replaced with water. If this process of pouring out two-thirds the content and replacing with water is repeated three more times, then the final ratio of milk to water in the glass, is

24 Nov 2024, Slot 1, Q61

- (A) 1 : 27 (B) 1 : 80
(C) 1 : 81 (D) 1 : 26

29. A fruit seller has a total of 187 fruits consisting of apples, mangoes and oranges. The number of apples and mangoes are in the ratio 5 : 2. After she sells 75 apples, 26 mangoes and half of the oranges, the ratio of number of unsold apples to number of unsold oranges becomes 3 : 2. The total number of unsold fruits is

24 Nov 2024, Slot 1, Q62

Type in the answer.

30. Two places A and B are 45 kms apart and connected by a straight road. Anil goes from A to B while Sunil goes from B to A. Starting at the same time, they cross each other in exactly 1 hour 30 minutes. If Anil reaches B exactly 1 hour 15 minutes after Sunil reaches A, the speed of Anil, in km per hour, is

- (A) 18 (B) 16
(C) 14 (D) 12
-

31. There are four numbers such that average of first two numbers is 1 more than the first number, average of first three numbers is 2 more than average of first two numbers, and average of first four numbers is 3 more than average of first three numbers. Then, the difference between the largest and the smallest numbers, is

24 Nov 2024, Slot 1, Q64

Type in the answer.

32. An amount of Rs 10000 is deposited in bank A for a certain number of years at a simple interest of 5% per annum. On maturity, the total amount received is deposited in bank B for another 5 years at a simple interest of 6% per annum. If the interests received from bank A and bank B are in the ratio 10 : 13, then the investment period, in years, in bank A is

24 Nov 2024, Slot 1, Q65

- (A) 4 (B) 5
(C) 3 (D) 6
-

CAT 2024 Slot 2 - Questions 33-40

33. Bina incurs 19% loss when she sells a product at Rs. 4860 to Shyam, who in turn sells this product to Hari. If Bina would have sold this product to Shyam at the purchase price of Hari, she would have obtained 17% profit. Then, the profit, in rupees, made by Shyam is

24 Nov 2024, Slot 2, Q47

Type in the answer.

34. A fruit seller has a stock of mangoes, bananas and apples with at least one fruit of each type. At the beginning of a day, the number of mangoes make up 40% of his stock. That day, he sells half of the mangoes, 96 bananas and 40% of the apples. At the end of the day, he ends up selling 50% of the fruits. The smallest possible total number of fruits in the stock at the beginning of the day is

24 Nov 2024, Slot 2, Q49

Type in the answer.

35. When Rajesh's age was same as the present age of Garima, the ratio of their ages was 3 : 2. When Garima's age becomes the same as the present age of Rajesh, the ratio of the ages of Rajesh and Garima will become

24 Nov 2024, Slot 2, Q53

- | | |
|-----------|-----------|
| (A) 3 : 2 | (B) 4 : 3 |
| (C) 5 : 4 | (D) 2 : 1 |

36. A company has 40 employees whose names are listed in a certain order. In the year 2022, the average bonus of the first 30 employees was Rs. 40000, of the last 30 employees was Rs. 60000, and of the first 10 and last 10 employees together was Rs. 50000. Next year, the average bonus of the first 10 employees increased by 100%, of the last 10 employees increased by 200% and of the remaining employees was unchanged. Then, the average bonus, in rupees, of all the 40 employees together in the year 2023 was

24 Nov 2024, Slot 2, Q56

- | | |
|-----------|-----------|
| (A) 95000 | (B) 90000 |
| (C) 80000 | (D) 85000 |

37. Amal and Vimal together can complete a task in 150 days, while Vimal and Sunil together can complete the same task in 100 days. Amal starts working on the task and works for 75 days, then Vimal takes over and works for 135 days. Finally, Sunil takes over and completes the remaining task in 45 days. If Amal had started the task alone and worked on all days, Vimal had worked on every second day, and Sunil had worked on every third day, then the number of days required to complete the task would have been

24 Nov 2024, Slot 2, Q57

Type in the answer.

38. Anil invests Rs 22000 for 6 years in a scheme with 4% interest per annum, compounded half-yearly. Separately, Sunil invests a certain amount in the same scheme for 5 years, and then reinvests the entire amount he receives at the end of 5 years, for one year at 10% simple interest. If the amounts received by

both at the end of 6 years are equal, then the initial investment, in rupees, made by Sunil is

24 Nov 2024, Slot 2, Q59

- (A) 20860 (B) 20640
(C) 20480 (D) 20808
-

39. A bus starts at 9 am and follows a fixed route every day. One day, it traveled at a constant speed of 60 km per hour and reached its destination 3.5 hours later than its scheduled arrival time. Next day, it traveled two-thirds of its route in one-third of its total scheduled travel time, and the remaining part of the route at 40 km per hour to reach just on time. The scheduled arrival time of the bus is

24 Nov 2024, Slot 2, Q60

- (A) 7 : 30 pm (B) 7 : 00 pm
(C) 9 : 00 pm (D) 10 : 30 pm
-

40. A vessel contained a certain amount of a solution of acid and water. When 2 litres of water was added to it, the new solution had 50% acid concentration. When 15 litres of acid was further added to this new solution, the final solution had 80% acid concentration. The ratio of water and acid in the original solution was

24 Nov 2024, Slot 2, Q67

- (A) 5 : 3 (B) 3 : 5
(C) 5 : 4 (D) 4 : 5
-

CAT 2024 Slot 3 - Questions 41-48

41. The average of three distinct real numbers is 28. If the smallest number is increased by 7 and the largest number is reduced by 10, the order of the numbers remains unchanged, and the new arithmetic mean becomes 2 more than the middle number, while the difference between the largest and the smallest numbers becomes 64. Then, the largest number in the original set of three numbers is

24 Nov 2024, Slot 3, Q49

Type in the answer.

42. Sam can complete a job in 20 days when working alone. Mohit is twice as fast as Sam and thrice as fast as Ayna in the same job. They undertake a job with an arrangement where Sam and Mohit work together on the first day, Sam and Ayna on the second day, Mohit and Ayna on the third day, and this three-day pattern is repeated till the work gets completed. Then, the fraction of total work done by Sam is

24 Nov 2024, Slot 3, Q51

- | | |
|--------------------|--------------------|
| (A) $\frac{1}{20}$ | (B) $\frac{3}{10}$ |
| (C) $\frac{1}{5}$ | (D) $\frac{3}{20}$ |

43. Aman invests Rs 4000 in a bank at a certain rate of interest, compounded annually. If the ratio of the value of the investment after 3 years to the value of the investment after 5 years is 25 : 36, then the minimum number of years required for the value of the investment to exceed Rs 20000 is

24 Nov 2024, Slot 3, Q55

Type in the answer.

44. A train travelled a certain distance at a uniform speed. Had the speed been 6 km per hour more, it would have needed 4 hours less. Had the speed been 6 km per hour less, it would have needed 6 hours more. The distance, in km, travelled by the train is

24 Nov 2024, Slot 3, Q57

- | | |
|---------|---------|
| (A) 720 | (B) 800 |
| (C) 780 | (D) 640 |

45. Gopi marks a price on a product in order to make 20% profit. Ravi gets 10% discount on this marked price, and thus saves Rs 15. Then, the profit, in rupees, made by Gopi by selling the product to Ravi, is

24 Nov 2024, Slot 3, Q59

- | | |
|--------|--------|
| (A) 10 | (B) 25 |
| (C) 15 | (D) 20 |

46. A certain amount of water was poured into a 300 litre container and the remaining portion of the container was filled with milk. Then an amount of this solution was taken out from the container which was twice the volume of water that was earlier poured into it, and water was poured to refill the container again. If the resulting solution contains 72% milk, then the amount of water, in litres,

that was initially poured into the container was

24 Nov 2024, Slot 3, Q60

Type in the answer.

47. Rajesh and Vimal own 20 hectares and 30 hectares of agricultural land, respectively, which are entirely covered by wheat and mustard crops. The cultivation area of wheat and mustard in the land owned by Vimal are in the ratio of 5 : 3. If the total cultivation area of wheat and mustard are in the ratio 11 : 9, then the ratio of cultivation area of wheat and mustard in the land owned by Rajesh is

24 Nov 2024, Slot 3, Q65

- | | |
|-----------|-----------|
| (A) 4 : 3 | (B) 7 : 9 |
| (C) 3 : 7 | (D) 1 : 1 |
-

48. After two successive increments, Gopal's salary became 187.5% of his initial salary. If the percentage of salary increase in the second increment was twice of that in the first increment, then the percentage of salary increase in the first increment was

24 Nov 2024, Slot 3, Q68

- | | |
|--------|----------|
| (A) 30 | (B) 27.5 |
| (C) 25 | (D) 20 |
-

49. A mixture P is formed by removing a certain amount of coffee from a coffee jar and replacing the same amount with cocoa powder. The same amount is again removed from mixture P and replaced with same amount of cocoa powder to form a new mixture Q. If the ratio of coffee and cocoa in the mixture Q is 16 : 9, then the ratio of cocoa in mixture P to that in mixture Q is

26 Nov 2023, Slot 1, Q52

- (A) 1 : 3 (B) 1 : 2
(C) 5 : 9 (D) 4 : 9

50. The minor angle between the hours hand and minutes hand of a clock was observed at 8:48 am. The minimum duration, in minutes, after 8.48 am when this angle increases by 50% is

26 Nov 2023, Slot 1, Q53

- (A) $\frac{36}{11}$ (B) 2
(C) 4 (D) $\frac{24}{11}$

51. Gita sells two objects A and B at the same price such that she makes a profit of 20% on object A and a loss of 10% on object B. If she increases the selling price such that objects A and B are still sold at an equal price and a profit of 10% is made on object B, then the profit made on object A will be nearest to

26 Nov 2023, Slot 1, Q54

- (A) 42% (B) 45%
(C) 47% (D) 49%

52. Brishti went on an 8-hour trip in a car. Before the trip, the car had travelled a total of x km till then, where x is a whole number and is palindromic, i.e., x remains unchanged when its digits are reversed. At the end of the trip, the car had travelled a total of 26862 km till then, this number again being palindromic. If Brishti never drove at more than 110 km/h, then the greatest possible average speed at which she drove during the trip, in km/h, was

26 Nov 2023, Slot 1, Q55

- (A) 110 (B) 90
(C) 100 (D) 80

53. In an examination, the average marks of 4 girls and 6 boys is 24. Each of the girls has the same marks while each of the boys has the same marks. If the marks of any girl is at most double the marks of any boy, but not less than the marks of any boy, then the number of possible distinct integer values of the total marks of 2 girls and 6 boys is

26 Nov 2023, Slot 1, Q56

- (A) 21 (B) 20
(C) 22 (D) 19

54. The salaries of three friends Sita, Gita and Mita are initially in the ratio 5 : 6 : 7, respectively. In the first year, they get salary hikes of 20%, 25% and 20%, respectively. In the second year, Sita and Mita get salary hikes of 40% and 25%, respectively, and the salary of Gita becomes equal to the mean salary of the

three friends. The salary hike of Gita in the second year is

26 Nov 2023, Slot 1, Q57

- (A) 25% (B) 28%
(C) 26% (D) 30%
-

55. Arvind travels from town A to town B, and Surbhi from town B to town A, both starting at the same time along the same route. After meeting each other, Arvind takes 6 hours to reach town B while Surbhi takes 24 hours to reach town A. If Arvind travelled at a speed of 54 km/h, then the distance, in km, between town A and town B is

26 Nov 2023, Slot 1, Q58

Type in the answer.

56. Anil invests Rs. 22000 for 6 years in a certain scheme with 4% interest per annum, compounded half-yearly. Sunil invests in the same scheme for 5 years, and then reinvests the entire amount received at the end of 5 years for one year at 10% simple interest. If the amounts received by both at the end of 6 years are same, then the initial investment made by Sunil, in rupees, is

26 Nov 2023, Slot 1, Q59

Type in the answer.

57. The amount of job that Amal, Sunil and Kamal can individually do in a day, are in harmonic progression. Kamal takes twice as much time as Amal to do the same amount of job. If Amal and Sunil work for 4 days and 9 days, respectively, Kamal needs to work for 16 days to finish the remaining job. Then the number of days Sunil will take to finish the job working alone, is

26 Nov 2023, Slot 1, Q60

Type in the answer.

CAT 2023 Slot 2 - Questions 58-66

58. Pipes A and C are fill pipes while Pipe B is a drain pipe of a tank. Pipe B empties the full tank in one hour less than the time taken by Pipe A to fill the empty tank. When pipes A, B and C are turned on together, the empty tank is filled in two hours. If pipes B and C are turned on together when the tank is empty and Pipe B is turned off after one hour, then Pipe C takes another one hour and 15 minutes to fill the remaining tank. If Pipe A can fill the empty tank in less than five hours, then the time taken, in minutes, by Pipe C to fill the empty tank is

26 Nov 2023, Slot 2, Q52

- (A) 90 (B) 120
(C) 75 (D) 60

59. Anil borrows Rs 2 lakhs at an interest rate of 8% per annum, compounded half-yearly. He repays Rs 10320 at the end of the first year and closes the loan by paying the outstanding amount at the end of the third year. Then, the total interest, in rupees, paid over the three years is nearest to

26 Nov 2023, Slot 2, Q53

- (A) 45311 (B) 51311
(C) 33130 (D) 40991

60. Ravi is driving at a speed of 40 km/h on a road. Vijay is 54 meters behind Ravi and driving in the same direction as Ravi. Ashok is driving along the same road from the opposite direction at a speed of 50 km/h and is 225 meters away from Ravi. The speed, in km/h, at which Vijay should drive so that all the three cross each other at the same time, is

26 Nov 2023, Slot 2, Q54

- (A) 58.8 (B) 67.2
(C) 61.6 (D) 64.4

61. Minu purchases a pair of sunglasses at Rs.1000 and sells to Kanu at 20% profit. Then, Kanu sells it back to Minu at 20% loss. Finally, Minu sells the same pair of sunglasses to Tanu. If the total profit made by Minu from all her transactions is Rs.500, then the percentage of profit made by Minu when she sold the pair of sunglasses to Tanu is

26 Nov 2023, Slot 2, Q55

- (A) 35.42% (B) 52%
(C) 31.25% (D) 26%

62. The price of a precious stone is directly proportional to the square of its weight. Sita has a precious stone weighing 18 units. If she breaks it into four pieces with each piece having distinct integer weight, then the difference between the highest and lowest possible values of the total price of the four pieces will be 288000. Then, the price of the original precious stone is

26 Nov 2023, Slot 2, Q56

- (A) 1944000 (B) 972000
(C) 1620000 (D) 1296000

63. In a company, 20% of the employees work in the manufacturing department. If the total salary obtained by all the manufacturing employees is one-sixth of the total salary obtained by all the employees in the company, then the ratio of the average salary obtained by the manufacturing employees to the average salary obtained by the nonmanufacturing employees is

26 Nov 2023, Slot 2, Q57

- (A) 6:5 (B) 4:5
(C) 5:4 (D) 5:6
-

64. If a certain amount of money is divided equally among n persons, each one receives Rs 352. However, if two persons receive Rs 506 each and the remaining amount is divided equally among the other persons, each of them receive less than or equal to Rs 330. Then, the maximum possible value of n is

26 Nov 2023, Slot 2, Q58

Type in the answer.

65. Jayant bought a certain number of white shirts at the rate of Rs 1000 per piece and a certain number of blue shirts at the rate of Rs 1125 per piece. For each shirt, he then set a fixed market price which was 25% higher than the average cost of all the shirts. He sold all the shirts at a discount of 10% and made a total profit of Rs.51000. If he bought both colors of shirts, then the maximum possible total number of shirts that he could have bought is

26 Nov 2023, Slot 2, Q59

Type in the answer.

66. A container has 40 liters of milk. Then, 4 liters are removed from the container and replaced with 4 liters of water. This process of replacing 4 liters of the liquid in the container with an equal volume of water is continued repeatedly. The smallest number of times of doing this process, after which the volume of milk in the container becomes less than that of water, is

26 Nov 2023, Slot 2, Q60

Type in the answer.

CAT 2023 Slot 3 - Questions 67-75

67. A merchant purchases a cloth at a rate of Rs.100 per meter and receives 5 cm length of cloth free for every 100 cm length of cloth purchased by him. He sells the same cloth at a rate of Rs.110 per meter but cheats his customers by giving 95 cm length of cloth for every 100 cm length of cloth purchased by the customers. If the merchant provides a 5% discount, the resulting profit earned by him is

26 Nov 2023, Slot 3, Q52

- (A) 4.2% (B) 9.7%
(C) 15.5% (D) 16%

68. Rahul, Rakshita and Gurmeet, working together, would have taken more than 7 days to finish a job. On the other hand, Rahul and Gurmeet, working together would have taken less than 15 days to finish the job. However, they all worked together for 6 days, followed by Rakshita, who worked alone for 3 more days to finish the job. If Rakshita had worked alone on the job then the number of days she would have taken to finish the job, cannot be

26 Nov 2023, Slot 3, Q53

- (A) 20 (B) 17
(C) 16 (D) 21

69. The population of a town in 2020 was 100000. The population decreased by $y\%$ from the year 2020 to 2021, and increased by $x\%$ from the year 2021 to 2022, where x and y are two natural numbers. If population in 2022 was greater than the population in 2020 and the difference between x and y is 10, then the lowest possible population of the town in 2021 was

26 Nov 2023, Slot 3, Q54

- (A) 72000 (B) 74000
(C) 73000 (D) 75000

70. Anil mixes cocoa with sugar in the ratio 3 : 2 to prepare mixture A, and coffee with sugar in the ratio 7 : 3 to prepare mixture B. He combines mixtures A and B in the ratio 2 : 3 to make a new mixture C. If he mixes C with an equal amount of milk to make a drink, then the percentage of sugar in this drink will be

26 Nov 2023, Slot 3, Q55

- (A) 17 (B) 16
(C) 21 (D) 24

71. There are three persons A, B and C in a room. If a person D joins the room, the average weight of the persons in the room reduces by x kg. Instead of D, if person E joins the room, the average weight of the persons in the room increases by $2x$ kg. If the weight of E is 12 kg more than that of D, then the value of x is

26 Nov 2023, Slot 3, Q56

- (A) 2 (B) 0.5
(C) 1 (D) 1.5

72. A boat takes 2 hours to travel downstream a river from port A to port B, and 3 hours to return to port A. Another boat takes a total of 6 hours to travel from port B to port A and return to port B. If the speeds of the boats and the river are constant, then the time, in hours, taken by the slower boat to travel from port A to port B is

26 Nov 2023, Slot 3, Q57

- (A) $12(\sqrt{5} - 2)$ (B) $3(3 + \sqrt{5})$
(C) $3(\sqrt{5} - 1)$ (D) $3(3 - \sqrt{5})$
-

73. The number of coins collected per week by two coin-collectors A and B are in the ratio 3 : 4. If the total number of coins collected by A in 5 weeks is a multiple of 7, and the total number of coins collected by B in 3 weeks is a multiple of 24, then the minimum possible number of coins collected by A in one week is

26 Nov 2023, Slot 3, Q58

Type in the answer.

74. A fruit seller has a stock of mangoes, bananas and apples with at least one fruit of each type. At the beginning of a day, the number of mangoes make up 40% of his stock. That day, he sells half of the mangoes, 96 bananas and 40% of the apples. At the end of the day, he ends up selling 50% of the fruits. The smallest possible total number of fruits in the stock at the beginning of the day is

26 Nov 2023, Slot 3, Q59

Type in the answer.

75. Gautam and Suhani, working together, can finish a job in 20 days. If Gautam does only 60% of his usual work on a day, Suhani must do 150% of her usual work on that day to exactly make up for it. Then, the number of days required by the faster worker to complete the job working alone is

26 Nov 2023, Slot 3, Q60

Type in the answer.

76. In a village, the ratio of number of males to females is 5 : 4. The ratio of number of literate males to literate females is 2 : 3. The ratio of the number of illiterate males to illiterate females is 4 : 3. If 3600 males in the village are literate, then the total number of females in the village is

27 Nov 2022, Slot 1, Q45

Type in the answer.

77. The average weight of students in a class increases by 600 gm when some new students join the class. If the average weight of the new students is 3 kg more than the average weight of the original students, then the ratio of the number of original students to the number of new students is

27 Nov 2022, Slot 1, Q46

- (A) 1 : 4 (B) 1 : 2
(C) 4 : 1 (D) 3 : 1

78. Trains A and B start traveling at the same time towards each other with constant speeds from stations X and Y, respectively. Train A reaches station Y in 10 minutes while train B takes 9 minutes to reach station X after meeting train A. Then the total time taken, in minutes, by train B to travel from station Y to station X is

27 Nov 2022, Slot 1, Q49

- (A) 6 (B) 15
(C) 10 (D) 12

79. Ankita buys 4 kg cashews, 14 kg peanuts and 6 kg almonds when the cost of 7 kg cashews is the same as that of 30 kg peanuts or 9 kg almonds. She mixes all the three nuts and marks a price for the mixture in order to make a profit of ₹1752. She sells 4 kg of the mixture at this marked price and the remaining at a 20% discount on the marked price, thus making a total profit of ₹744. Then the amount, in rupees, that she had spent in buying almonds is

27 Nov 2022, Slot 1, Q51

- (A) 1680 (B) 1176
(C) 2520 (D) 1440

80. Amal buys 110 kg of syrup and 120 kg of juice, syrup being 20% less costly than juice, per kg. He sells 10 kg of syrup at 10% profit and 20 kg of juice at 20% profit. Mixing the remaining juice and syrup, Amal sells the mixture at ₹ 308.32 per kg and makes an overall profit of 64%. Then, Amal's cost price for syrup, in rupees per kg, is

27 Nov 2022, Slot 1, Q56

Type in the answer.

81. The average of three integers is 13. When a natural number n is included, the average of these four integers remains an odd integer. The minimum possible value of n is

- (A) 3 (B) 4
(C) 5 (D) 1
-

82. A mixture contains lemon juice and sugar syrup in equal proportion. If a new mixture is created by adding this mixture and sugar syrup in the ratio 1 : 3, then the ratio of lemon juice and sugar syrup in the new mixture is

27 Nov 2022, Slot 1, Q59

- (A) 1 : 4 (B) 1 : 5
(C) 1 : 6 (D) 1 : 7
-

83. Alex invested his savings in two parts. The simple interest earned on the first part at 15% per annum for 4 years is the same as the simple interest earned on the second part at 12% per annum for 3 years. Then, the percentage of his savings invested in the first part is

27 Nov 2022, Slot 1, Q64

- (A) 37.5% (B) 62.5%
(C) 60% (D) 40%
-

84. Pinky is standing in a queue at a ticket counter. Suppose the ratio of the number of persons standing ahead of Pinky to the number of persons standing behind her in the queue is 3 : 5. If the total number of persons in the queue is less than 300, then the maximum possible number of persons standing ahead of Pinky is

27 Nov 2022, Slot 1, Q65

Type in the answer.

CAT 2022 Slot 2 - Questions 85-92

85. Mr. Pinto invests one-fifth of his capital at 6%, one-third at 10% and the remaining at 1%, each rate being simple interest per annum. Then, the minimum number of years required for the cumulative interest income from these investments to equal or exceed his initial capital is

27 Nov 2022, Slot 2, Q45

Type in the answer.

86. The average of a non-decreasing sequence of N numbers $a_1, a_2, \dots, a_N$ is 300. If a_1 is replaced by $6a_1$, the new average becomes 400. Then, the number of possible values of a_1 , is

27 Nov 2022, Slot 2, Q46

Type in the answer.

87. Manu earns ₹4000 per month and wants to save an average of ₹550 per month in a year. In the first nine months, his monthly expense was ₹3500, and he foresees that, tenth month onward, his monthly expense will increase to ₹3700. In order to meet his yearly savings target, his monthly earnings, in rupees, from the tenth month onward should be

27 Nov 2022, Slot 2, Q48

- | | |
|----------|----------|
| (A) 4400 | (B) 4200 |
| (C) 4300 | (D) 4350 |

88. Two ships meet mid-ocean, and then, one ship goes south and the other ship goes west, both travelling at constant speeds. Two hours later, they are 60 km apart. If the speed of one of the ships is 6 km per hour more than the other one, then the speed, in km per hour, of the slower ship is

27 Nov 2022, Slot 2, Q52

- | | |
|--------|--------|
| (A) 20 | (B) 12 |
| (C) 18 | (D) 24 |

89. In an election, there were four candidates and 80% of the registered voters casted their votes. One of the candidates received 30% of the casted votes while the other three candidates received the remaining casted votes in the proportion 1 : 2 : 3. If the winner of the election received 2512 votes more than the candidate with the second highest votes, then the number of registered voters was

27 Nov 2022, Slot 2, Q56

- | | |
|-----------|-----------|
| (A) 50240 | (B) 40192 |
| (C) 60288 | (D) 62800 |

90. Working alone, the times taken by Anu, Tanu and Manu to complete any job are in the ratio 5 : 8 : 10. They accept a job which they can finish in 4 days if they all work together for 8 hours per day. However, Anu and Tanu work together for the first 6 days, working 6 hours 40 minutes per day. Then, the number of hours that Manu will take to complete the remaining job working alone is

27 Nov 2022, Slot 2, Q60

Type in the answer.

91. There are two containers of the same volume, first container half-filled with sugar syrup and the second container half-filled with milk. Half the content of the first container is transferred to the second container, and then the half of this mixture is transferred back to the first container. Next, half the content of the first container is transferred back to the second container. Then the ratio of sugar syrup and milk in the second container is

27 Nov 2022, Slot 2, Q61

- | | |
|-----------|-----------|
| (A) 4 : 5 | (B) 6 : 5 |
| (C) 5 : 4 | (D) 5 : 6 |
-

92. Five students, including Amit, appear for an examination in which possible marks are integers between 0 and 50, both inclusive. The average marks for all the students is 38 and exactly three students got more than 32. If no two students got the same marks and Amit got the least marks among the five students, then the difference between the highest and lowest possible marks of Amit is

27 Nov 2022, Slot 2, Q65

- | | |
|--------|--------|
| (A) 22 | (B) 21 |
| (C) 24 | (D) 20 |
-

93. Consider six distinct natural numbers such that the average of the two smallest numbers is 14, and the average of the two largest numbers is 28. Then, the maximum possible value of the average of these six numbers is

27 Nov 2022, Slot 3, Q48

- (A) 23 (B) 24
(C) 23.5 (D) 22.5

94. A group of N people worked on a project. They finished 35% of the project by working 7 hours a day for 10 days. Thereafter, 10 people left the group and the remaining people finished the rest of the project in 14 days by working 10 hours a day. Then the value of N is

27 Nov 2022, Slot 3, Q51

- (A) 150 (B) 23
(C) 36 (D) 140

95. A glass contains 500 cc of milk and a cup contains 500 cc of water. From the glass, 150 cc of milk is transferred to the cup and mixed thoroughly. Next, 150 cc of this mixture is transferred from the cup to the glass. Now, the amount of water in the glass and the amount of milk in the cup are in the ratio

27 Nov 2022, Slot 3, Q52

- (A) 1 : 1 (B) 10 : 13
(C) 3 : 10 (D) 10 : 3

96. Nitu has an initial capital of ₹20,000. Out of this, she invests ₹8,000 at 5.5% in bank A, ₹5,000 at 5.6% in bank B and the remaining amount at $x\%$ in bank C, each rate being simple interest per annum. Her combined annual interest income from these investments is equal to 5% of the initial capital. If she had invested her entire initial capital in bank C alone, then her annual interest income, in rupees, would have been

27 Nov 2022, Slot 3, Q53

- (A) 700 (B) 800
(C) 900 (D) 1000

97. Two cars travel from different locations at constant speeds. To meet each other after starting at the same time, they take 1.5 hours if they travel towards each other, but 10.5 hours if they travel in the same direction. If the speed of the slower car is 60 km/hr, then the distance traveled, in km, by the slower car when it meets the other car while traveling towards each other, is

27 Nov 2022, Slot 3, Q54

- (A) 100 (B) 90
(C) 120 (D) 150

98. In an examination, the average marks of students in sections A and B are 32 and 60, respectively. The number of students in section A is 10 less than that in section B. If the average marks of all the students across both the sections combined is an integer, then the difference between the maximum and

minimum possible number of students in section A is

27 Nov 2022, Slot 3, Q58

Type in the answer.

99. Moody takes 30 seconds to finish riding an escalator if he walks on it at his normal speed in the same direction. He takes 20 seconds to finish riding the escalator if he walks at twice his normal speed in the same direction. If Moody decides to stand still on the escalator, then the time, in seconds, needed to finish riding the escalator is

27 Nov 2022, Slot 3, Q64

Type in the answer.

100. Two ships are approaching a port along straight routes at constant speeds. Initially, the two ships and the port formed an equilateral triangle with sides of length 24 km. When the slower ship travelled 8 km, the triangle formed by the new positions of the two ships and the port became right-angled. When the faster ship reaches the port, the distance, in km, between the other ship and the port will be

27 Nov 2022, Slot 3, Q65

- | | |
|-------|--------|
| (A) 4 | (B) 12 |
| (C) 8 | (D) 6 |
-

101. Bob can finish a job in 40 days, if he works alone. Alex is twice as fast as Bob and thrice as fast as Cole in the same job. Suppose Alex and Bob work together on the first day, Bob and Cole work together on the second day, Cole and Alex work together on the third day, and then, they continue the work by repeating this three - day roster, with Alex and Bob working together on the fourth day, and so on. Then, the total number of days Alex would have worked when the job gets finished, is

27 Nov 2022, Slot 3, Q66

Type in the answer.

102. Two trains cross each other in 14 seconds when running in opposite directions along parallel tracks. The faster train is 160 m long and crosses a lamp post in 12 seconds. If the speed of the other train is 6 km/hr less than the faster one, its length, in m, is

28 Nov 2021, Slot 1, Q45

- (A) 184 (B) 192
(C) 190 (D) 180

103. Anu, Vinu and Manu can complete a work alone in 15 days, 12 days and 20 days, respectively. Vinu works everyday. Anu works only on alternate days starting from the first day while Manu works only on alternate days starting from the second day. Then, the number of days needed to complete the work is

28 Nov 2021, Slot 1, Q48

- (A) 5 (B) 8
(C) 6 (D) 7

104. The amount Neeta and Geeta together earn in a day equals what Sita alone earns in 6 days. The amount Sita and Neeta together earn in a day equals what Geeta alone earns in 2 days. The ratio of the daily earnings of the one who earns the most to that of the one who earns the least is

28 Nov 2021, Slot 1, Q49

- (A) 3:2 (B) 11:7
(C) 11:3 (D) 7:3

105. Onion is sold for 5 consecutive months at the rate of Rs 10, 20, 25, 25, and 50 per kg, respectively. A family spends a fixed amount of money on onion for each of the first three months, and then spends half that amount on onion for each of the next two months. The average expense for onion, in rupees per kg, for the family over these 5 months is closest to

28 Nov 2021, Slot 1, Q50

- (A) 26 (B) 18
(C) 16 (D) 20

106. Amal purchases some pens at ₹ 8 each. To sell these, he hires an employee at a fixed wage. He sells 100 of these pens at ₹ 12 each. If the remaining pens are sold at ₹ 11 each, then he makes a net profit of ₹ 300, while he makes a net loss of ₹ 300 if the remaining pens are sold at ₹ 9 each. The wage of the employee, in INR, is

28 Nov 2021, Slot 1, Q52

Type in the answer.

107. Anil invests some money at a fixed rate of interest, compounded annually. If the interests accrued during the second and third year are ₹ 806.25 and ₹ 866.72, respectively, the interest accrued, in INR, during the fourth year is nearest to

- (A) 929.48 (B) 934.65
(C) 931.72 (D) 926.84
-

108. Suppose hospital A admitted 21 less Covid infected patients than hospital B, and all eventually recovered. The sum of recovery days for patients in hospitals A and B were 200 and 152, respectively. If the average recovery days for patients admitted in hospital A was 3 more than the average in hospital B then the number admitted in hospital A was

28 Nov 2021, Slot 1, Q57

Type in the answer.

109. Amar, Akbar and Anthony are working on a project. Working together Amar and Akbar can complete the project in 1 year, Akbar and Anthony can complete in 16 months, Anthony and Amar can complete in 2 years. If the person who is neither the fastest nor the slowest works alone, the time in months he will take to complete the project is

28 Nov 2021, Slot 1, Q61

Type in the answer.

110. The strength of an indigo solution in percentage is equal to the amount of indigo in grams per 100 cc of water. Two 800 cc bottles are filled with indigo solutions of strengths 33% and 17%, respectively. A part of the solution from the first bottle is thrown away and replaced by an equal volume of the solution from the second bottle. If the strength of the indigo solution in the first bottle has now changed to 21% then the volume, in cc, of the solution left in the second bottle is

28 Nov 2021, Slot 1, Q63

Type in the answer.

111. Identical chocolate pieces are sold in boxes of two sizes, small and large. The large box is sold for twice the price of the small box. If the selling price per gram of chocolate in the large box is 12% less than that in the small box, then the percentage by which the weight of chocolate in the large box exceeds that in the small box is nearest to

28 Nov 2021, Slot 1, Q64

- (A) 144 (B) 127
(C) 135 (D) 124
-

CAT 2021 Slot 2 - Questions 112-120

112. Raj invested ₹ 10000 in a fund. At the end of first year, he incurred a loss but his balance was more than ₹ 5000. This balance, when invested for another year, grew and the percentage of growth in the second year was five times the percentage of loss in the first year. If the gain of Raj from the initial investment over the two year period is 35%, then the percentage of loss in the first year is

28 Nov 2021, Slot 2, Q48

- (A) 5 (B) 15
(C) 17 (D) 10

113. Two trains A and B were moving in opposite directions, their speeds being in the ratio 5 : 3. The front end of A crossed the rear end of B 46 seconds after the front ends of the trains had crossed each other. It took another 69 seconds for the rear ends of the trains to cross each other. The ratio of length of train A to that of train B is

28 Nov 2021, Slot 2, Q50

- (A) 3:2 (B) 5:3
(C) 2:3 (D) 2:1

114. From a container filled with milk, 9 litres of milk are drawn and replaced with water. Next, from the same container, 9 litres are drawn and again replaced with water. If the volumes of milk and water in the container are now in the ratio of 16 : 9, then the capacity of the container, in litres, is

28 Nov 2021, Slot 2, Q52

Type in the answer.

115. Anil can paint a house in 60 days while Bimal can paint it in 84 days. Anil starts painting and after 10 days, Bimal and Charu join him. Together, they complete the painting in 14 more days. If they are paid a total of ₹ 21000 for the job, then the share of Charu, in INR, proportionate to the work done by him, is

28 Nov 2021, Slot 2, Q59

- (A) 9000 (B) 9200
(C) 9100 (D) 9150

116. A box has 450 balls, each either white or black, there being as many metallic white balls as metallic black balls. If 40% of the white balls and 50% of the black balls are metallic, then the number of non-metallic balls in the box is

28 Nov 2021, Slot 2, Q60

Type in the answer.

117. In a football tournament, a player has played a certain number of matches and 10 more matches are to be played. If he scores a total of one goal over the next 10 matches, his overall average will be 0.15 goals per match. On the other hand, if he scores a total of two goals over the next 10 matches, his overall average will be 0.2 goals per match. The number of matches he has played is

28 Nov 2021, Slot 2, Q61

Type in the answer.

118. A person buys tea of three different qualities at ₹ 800, ₹ 500, and ₹ 300 per kg, respectively, and the amounts bought are in the proportion 2 : 3 : 5. She mixes all the tea and sells one-sixth of the mixture at ₹ 700 per kg. The price, in INR per kg, at which she should sell the remaining tea, to make an overall profit of 50%, is

28 Nov 2021, Slot 2, Q62

- | | |
|---------|---------|
| (A) 653 | (B) 688 |
| (C) 692 | (D) 675 |

119. Anil, Bobby, and Chintu jointly invest in a business and agree to share the overall profit in proportion to their investments. Anil's share of investment is 70%. His share of profit decreases by ₹ 420 if the overall profit goes down from 18% to 15%. Chintu's share of profit increases by ₹ 80 if the overall profit goes up from 15% to 17%. The amount, in INR, invested by Bobby is

28 Nov 2021, Slot 2, Q65

- | | |
|----------|----------|
| (A) 2000 | (B) 2400 |
| (C) 2200 | (D) 1800 |

120. Two pipes A and B are attached to an empty water tank. Pipe A fills the tank while pipe B drains it. If pipe A is opened at 2 pm and pipe B is opened at 3 pm, then the tank becomes full at 10 pm. Instead, if pipe A is opened at 2 pm and pipe B is opened at 4 pm, then the tank becomes full at 6 pm. If pipe B is not opened at all, then the time, in minutes, taken to fill the tank is

28 Nov 2021, Slot 2, Q66

- | | |
|---------|---------|
| (A) 144 | (B) 140 |
| (C) 264 | (D) 120 |

CAT 2021 Slot 3 - Questions 121-129

121. One day, Rahul started a work at 9 AM and Gautam joined him two hours later. They then worked together and completed the work at 5 PM the same day. If both had started at 9 AM and worked together, the work would have been completed 30 minutes earlier. Working alone, the time Rahul would have taken, in hours, to complete the work is

28 Nov 2021, Slot 3, Q46

- (A) 11.5 (B) 10
(C) 12.5 (D) 12

122. In a tournament, a team has played 40 matches so far and won 30% of them. If they win 60% of the remaining matches, their overall win percentage will be 50%. Suppose they win 90% of the remaining matches, then the total number of matches won by the team in the tournament will be

28 Nov 2021, Slot 3, Q47

- (A) 80 (B) 78
(C) 84 (D) 86

123. The total of male and female populations in a city increased by 25% from 1970 to 1980. During the same period, the male population increased by 40% while the female population increased by 20%. From 1980 to 1990, the female population increased by 25%. In 1990, if the female population is twice the male population, then the percentage increase in the total of male and female populations in the city from 1970 to 1990 is

28 Nov 2021, Slot 3, Q50

- (A) 68.25 (B) 68.75
(C) 68.50 (D) 69.25

124. The arithmetic mean of scores of 25 students in an examination is 50. Five of these students top the examination with the same score. If the scores of the other students are distinct integers with the lowest being 30, then the maximum possible score of the toppers is

28 Nov 2021, Slot 3, Q52

Type in the answer.

125. A tea shop offers tea in cups of three different sizes. The product of the prices, in INR, of three different sizes is equal to 800. The prices of the smallest size and the medium size are in the ratio 2 : 5. If the shop owner decides to increase the prices of the smallest and the medium ones by INR 6 keeping the price of the largest size unchanged, the product then changes to 3200. The sum of the original prices of three different sizes, in INR, is

28 Nov 2021, Slot 3, Q56

Type in the answer.

126. Mira and Amal walk along a circular track, starting from the same point at the same time. If they walk in the same direction, then in 45 minutes, Amal completes exactly 3 more rounds than Mira. If they walk in opposite directions, then they meet for the first time exactly after 3 minutes.

The number of rounds Mira walks in one hour is

28 Nov 2021, Slot 3, Q57

Type in the answer.

127. If a certain weight of an alloy of silver and copper is mixed with 3 kg of pure silver, the resulting alloy will have 90% silver by weight. If the same weight of the initial alloy is mixed with 2 kg of another alloy which has 90% silver by weight, the resulting alloy will have 84% silver by weight. Then, the weight of the initial alloy, in kg, is

28 Nov 2021, Slot 3, Q58

- | | |
|---------|---------|
| (A) 3.5 | (B) 2.5 |
| (C) 3 | (D) 4 |
-

128. Bank A offers 6% interest rate per annum compounded half-yearly. Bank B and Bank C offer simple interest but the annual interest rate offered by Bank C is twice that of Bank B. Raju invests a certain amount in Bank B for a certain period and Rupa invests ₹ 10,000 in Bank C for twice that period. The interest that would accrue to Raju during that period is equal to the interest that would have accrued had he invested the same amount in Bank A for one year. The interest accrued, in INR, to Rupa is

28 Nov 2021, Slot 3, Q60

- | | |
|----------|----------|
| (A) 3436 | (B) 2436 |
| (C) 2346 | (D) 1436 |
-

129. Anil can paint a house in 12 days while Barun can paint it in 16 days. Anil, Barun, and Chandu undertake to paint the house for ₹ 24000 and the three of them together complete the painting in 6 days. If Chandu is paid in proportion to the work done by him, then the amount in INR received by him is

28 Nov 2021, Slot 3, Q62

Type in the answer.

CAT 2020 Slot 1 - Questions 130-138

130. A straight road connects points A and B. Car 1 travels from A to B and Car 2 travels from B to A, both leaving at the same time. After meeting each other, they take 45 minutes and 20 minutes, respectively, to complete their journeys. If Car 1 travels at the speed of 60 km/hr, then the speed of Car 2, in km/hr, is

29 Nov 2020, Slot 1, Q61

- (A) 100 (B) 90
(C) 80 (D) 70

131. A person spent Rs 50000 to purchase a desktop computer and a laptop computer. He sold the desktop at 20% profit and the laptop at 10% loss. If overall he made a 2% profit then the purchase price, in rupees, of the desktop is

29 Nov 2020, Slot 1, Q62

Type in the answer.

132. A solution, of volume 40 litres, has dye and water in the proportion 2 : 3. Water is added to the solution to change this proportion to 2 : 5. If one fourths of this diluted solution is taken out, how many litres of dye must be added to the remaining solution to bring the proportion back to 2 : 3?

29 Nov 2020, Slot 1, Q63

Type in the answer.

133. An alloy is prepared by mixing three metals A, B and C in the proportion 3 : 4 : 7 by volume. Weights of the same volume of the metals A, B and C are in the ratio 5 : 2 : 6. In 130 kg of the alloy, the weight, in kg, of the metal C is

29 Nov 2020, Slot 1, Q65

- (A) 48 (B) 84
(C) 70 (D) 96

134. Leaving home at the same time, Amal reaches the office at 10:15 am if he travels at 8 km/hr, and at 9:40 am if he travels at 15 km/hr. Leaving home at 9:10 am, at what speed, in km/hr, must he travel so as to reach office exactly at 10 am?

29 Nov 2020, Slot 1, Q68

- (A) 13 (B) 12
(C) 14 (D) 11

135. A train travelled at one-thirds of its usual speed, and hence reached the destination 30 minutes after the scheduled time. On its return journey, the train initially travelled at its usual speed for 5 minutes but then stopped for 4 minutes for an emergency. The percentage by which the train must now increase its usual speed so as to reach the destination at the scheduled time, is nearest to

29 Nov 2020, Slot 1, Q69

- (A) 50 (B) 58
(C) 67 (D) 61

136. Two persons are walking beside a railway track at respective speeds of 2 and 4 km per hour in the same direction. A train came from behind them and crossed them in 90 and 100 seconds, respectively. The time, in seconds, taken by the train to cross an electric post is nearest to

29 Nov 2020, Slot 1, Q71

- | | |
|--------|--------|
| (A) 87 | (B) 82 |
| (C) 78 | (D) 75 |
-

137. In a group of people, 28% of the members are young while the rest are old. If 65% of the members are literates, and 25% of the literates are young, then the percentage of old people among the illiterates is nearest to

29 Nov 2020, Slot 1, Q73

- | | |
|--------|--------|
| (A) 62 | (B) 55 |
| (C) 59 | (D) 66 |
-

138. Veeru invested Rs 10000 at 5% simple annual interest, and exactly after two years, Joy invested Rs 8000 at 10% simple annual interest. How many years after Veeru's investment, will their balances, i.e., principal plus accumulated interest, be equal?

29 Nov 2020, Slot 1, Q74

Type in the answer.

CAT 2020 Slot 2 - Questions 139-148

139. The distance from B to C is thrice that from A to B. Two trains travel from A to C via B. The speed of train 2 is double that of train 1 while traveling from A to B and their speeds are interchanged while traveling from B to C. The ratio of the time taken by train 1 to that taken by train 2 in travelling from A to C is

29 Nov 2020, Slot 2, Q51

- (A) 5:7 (B) 4:1
(C) 1:4 (D) 7:5

140. John takes twice as much time as Jack to finish a job. Jack and Jim together take one-thirds of the time to finish the job than John takes working alone. Moreover, in order to finish the job, John takes three days more than that taken by three of them working together. In how many days will Jim finish the job working alone?

29 Nov 2020, Slot 2, Q52

Type in the answer.

141. For the same principal amount, the compound interest for two years at 5% per annum exceeds the simple interest for three years at 3% per annum by Rs 1125. Then the principal amount in rupees is

29 Nov 2020, Slot 2, Q54

Type in the answer.

142. In a car race, car A beats car B by 45 km. car B beats car C by 50 km. and car A beats car C by 90 km. The distance (in km) over which the race has been conducted is

29 Nov 2020, Slot 2, Q56

- (A) 475 (B) 450
(C) 500 (D) 550

143. A sum of money is split among Amal, Sunil and Mita so that the ratio of the shares of Amal and Sunil is 3:2, while the ratio of the shares of Sunil and Mita is 4:5. If the difference between the largest and the smallest of these three shares is Rs.400, then Sunil's share, in rupees, is

29 Nov 2020, Slot 2, Q59

Type in the answer.

144. In a group of 10 students, the mean of the lowest 9 scores is 42 while the mean of the highest 9 scores is 47. For the entire group of 10 students, the maximum possible mean exceeds the minimum possible mean by

29 Nov 2020, Slot 2, Q62

- (A) 5 (B) 4
(C) 3 (D) 6

145. A and B are two points on a straight line. Ram runs from A to B while Rahim runs from B to A. After crossing each other. Ram and Rahim reach their destination in one minute and four minutes, respectively. if they start at the same time, then the ratio of Ram's speed to Rahim's speed is

- (A) $\frac{1}{2}$ (B) $\sqrt{2}$
 (C) 2 (D) $2\sqrt{2}$

146. Two circular tracks T1 and T2 of radii 100 m and 20 m, respectively touch at a point A. Starting from A at the same time, Ram and Rahim are walking on track T1 and track T2 at speeds 15 km/hr and 5 km/hr respectively. The number of full rounds that Ram will make before he meets Rahim again for the first time is

29 Nov 2020, Slot 2, Q64

- (A) 5 (B) 3
 (C) 2 (D) 4

147. Anil buys 12 toys and labels each with the same selling price. He sells 8 toys initially at 20% discount on the labeled price. Then he sells the remaining 4 toys at an additional 25% discount on the discounted price. Thus, he gets a total of Rs 2112, and makes a 10% profit. With no discounts, his percentage of profit would have been

29 Nov 2020, Slot 2, Q66

- (A) 50 (B) 60
 (C) 54 (D) 55

148. In May, John bought the same amount of rice and the same amount of wheat as he had bought in April, but spent ₹ 150 more due to price increase of rice and wheat by 20% and 12%, respectively. If John had spent ₹ 450 on rice in April, then how much did he spend on wheat in May?

29 Nov 2020, Slot 2, Q71

- (A) Rs.560 (B) Rs.570
 (C) Rs.590 (D) Rs.580

CAT 2020 Slot 3 - Questions 149-158

149. Two alcohol solutions, A and B, are mixed in the proportion 1:3 by volume. The volume of the mixture is then doubled by adding solution A such that the resulting mixture has 72% alcohol. If solution A has 60% alcohol, then the percentage of alcohol in solution B is

29 Nov 2020, Slot 3, Q51

- (A) 90% (B) 94%
(C) 92% (D) 89%

150. A batsman played $n + 2$ innings and got out on all occasions. His average score in these $n + 2$ innings was 29 runs and he scored 38 and 15 runs in the last two innings. The batsman scored less than 38 runs in each of the first n innings. In these n innings, his average score was 30 runs and lowest score was x runs. The smallest possible value of x is

29 Nov 2020, Slot 3, Q52

- (A) 4 (B) 3
(C) 2 (D) 1

151. A contractor agreed to construct a 6 km road in 200 days. He employed 140 persons for the work. After 60 days, he realized that only 1.5 km road has been completed. How many additional people would he need to employ in order to finish the work exactly on time?

29 Nov 2020, Slot 3, Q54

Type in the answer.

152. Dick is thrice as old as Tom and Harry is twice as old as Dick. If Dick's age is 1 year less than the average age of all three, then Harry's age, in years, is

29 Nov 2020, Slot 3, Q57

Type in the answer.

153. Vimla starts for office every day at 9 am and reaches exactly on time if she drives at her usual speed of 40 km/hr. She is late by 6 minutes if she drives at 35 km/hr. One day, she covers two-thirds of her distance to office in one-third of her usual total time to reach office, and then stops for 8 minutes. The speed, in km/hr, at which she should drive the remaining distance to reach office exactly on time is

29 Nov 2020, Slot 3, Q58

- (A) 29 (B) 26
(C) 28 (D) 27

154. In the final examination, Bishnu scored 52% and Asha scored 64%. The marks obtained by Bishnu is 23 less, and that by Asha is 34 more than the marks obtained by Ramesh. The marks obtained by Geeta, who scored 84%, is

29 Nov 2020, Slot 3, Q61

- (A) 357 (B) 417
(C) 439 (D) 399

155. A person invested a certain amount of money at 10% annual interest, compounded half-yearly. After one and a half years, the interest and principal together became Rs.18522. The amount, in rupees, that the person had invested is

29 Nov 2020, Slot 3, Q63

Type in the answer.

156. A man buys 35 kg of sugar and sets a marked price in order to make a 20% profit. He sells 5 kg at this price, and 15 kg at a 10% discount. Accidentally, 3 kg of sugar is wasted. He sells the remaining sugar by raising the marked price by p percent so as to make an overall profit of 15%. Then p is nearest to

29 Nov 2020, Slot 3, Q64

- | | |
|--------|--------|
| (A) 22 | (B) 35 |
| (C) 25 | (D) 31 |

157. A and B are two railway stations 90 km apart. A train leaves A at 9:00 am, heading towards B at a speed of 40 km/hr. Another train leaves B at 10:30 am, heading towards A at a speed of 20 km/hr. The trains meet each other at

29 Nov 2020, Slot 3, Q66

- | | |
|----------------|----------------|
| (A) 11 : 45 am | (B) 11 : 20 am |
| (C) 11 : 00 am | (D) 10 : 45 am |

158. Anil, Sunil, and Ravi run along a circular path of length 3 km, starting from the same point at the same time, and going in the clockwise direction. If they run at speeds of 15 km/hr, 10 km/hr, and 8 km/hr, respectively, how much distance in km will Ravi have run when Anil and Sunil meet again for the first time at the starting point?

29 Nov 2020, Slot 3, Q71

- | | |
|---------|---------|
| (A) 4.8 | (B) 4.6 |
| (C) 5.2 | (D) 4.2 |

159. Two cars travel the same distance starting at 10:00 am and 11:00 am, respectively, on the same day. They reach their common destination at the same point of time. If the first car travelled for at least 6 hours, then the highest possible value of the percentage by which the speed of the second car could exceed that of the first car is

24 Nov 2019, Slot 1, Q67

- (A) 20 (B) 30
(C) 25 (D) 10

160. The income of Amala is 20% more than that of Bimala and 20% less than that of Kamala. If Kamala's income goes down by 4% and Bimala's goes up by 10%, then the percentage by which Kamala's income would exceed Bimala's is nearest to

24 Nov 2019, Slot 1, Q71

- (A) 31 (B) 29
(C) 28 (D) 32

161. The wheels of bicycles A and B have radii 30 cm and 40 cm, respectively. While traveling a certain distance, each wheel of A required 5000 more revolutions than each wheel of B. If bicycle B traveled this distance in 45 minutes, then its speed, in km per hour, was

24 Nov 2019, Slot 1, Q72

- (A) 18π (B) 14π
(C) 16π (D) 12π

162. In a race of three horses, the first beat the second by 11 metres and the third by 90 metres. If the second beat the third by 80 metres, what was the length, in metres, of the racecourse?

24 Nov 2019, Slot 1, Q74

Type in the answer.

163. Amala, Bina, and Gouri invest money in the ratio 3 : 4 : 5 in fixed deposits having respective annual interest rates in the ratio 6 : 5 : 4. What is their total interest income (in Rs) after a year, if Bina's interest income exceeds Amala's by Rs 250?

24 Nov 2019, Slot 1, Q77

- (A) 6350 (B) 6000
(C) 7000 (D) 7250

164. One can use three different transports which move at 10, 20, and 30 kmph, respectively to reach from A to B. Amal took each mode of transport for $\frac{1}{3}$ of his total journey time, while Bimal took each mode of transport for $\frac{1}{3}$ of the total distance. The percentage by which Bimal's travel time exceeds Amal's travel time is nearest to

- (A) 22 (B) 20
(C) 19 (D) 21

165. Meena scores 40% in an examination and after review, even though her score is increased by 50%, she fails by 35 marks. If her post-review score is increased by 20%, she will have 7 marks more than the passing score. The percentage score needed for passing the examination is

24 Nov 2019, Slot 1, Q81

- (A) 60 (B) 80
(C) 70 (D) 75

166. A person invested a total amount of Rs 15 lakh. A part of it was invested in a fixed deposit earning 6% annual interest, and the remaining amount was invested in two other deposits in the ratio 2 : 1, earning annual interest at the rates of 4% and 3%, respectively. If the total annual interest income is Rs 76000 then the amount (in Rs lakh) invested in the fixed deposit was

24 Nov 2019, Slot 1, Q82

Type in the answer.

167. At their usual efficiency levels, A and B together finish a task in 12 days. If A had worked half as efficiently as she usually does, and B had worked thrice as efficiently as he usually does, the task would have been completed in 9 days. How many days would A take to finish the task if she works alone at her usual efficiency?

24 Nov 2019, Slot 1, Q86

- (A) 36 (B) 24
(C) 18 (D) 12

168. In a class, 60% of the students are girls and the rest are boys. There are 30 more girls than boys. If 68% of the students, including 30 boys, pass an examination, the percentage of the girls who do not pass is

24 Nov 2019, Slot 1, Q87

Type in the answer.

169. On selling a pen at 5% loss and a book at 15% gain, Karim gains Rs. 7. If he sells the pen at 5% gain and the book at 10% gain, he gains Rs. 13. What is the cost price of the book in Rupees?

24 Nov 2019, Slot 1, Q89

- (A) 95 (B) 85
(C) 80 (D) 100

170. A chemist mixes two liquids 1 and 2. One litre of liquid 1 weighs 1 kg and one litre of liquid 2 weighs 800 gm. If half litre of the mixture weighs 480 gm, then the percentage of liquid 1 in the mixture, in terms of volume, is

- (A) 80 (B) 70
(C) 85 (D) 75
-

171. Ramesh and Gautam are among 22 students who write an examination. Ramesh scores 82.5. The average score of the 21 students other than Gautam is 62. The average score of all the 22 students is one more than the average score of the 21 students other than Ramesh. The score of Gautam is

24 Nov 2019, Slot 1, Q91

- (A) 53 (B) 51
(C) 48 (D) 49
-

172. Three men and eight machines can finish a job in half the time taken by three machines and eight men to finish the same job. If two machines can finish the job in 13 days, then how many men can finish the job in 13 days?

24 Nov 2019, Slot 1, Q93

Type in the answer.

CAT 2019 Slot 2 - Questions 173-185

173. The average of 30 integers is 5. Among these 30 integers, there are exactly 20 which do not exceed 5. What is the highest possible value of the average of these 20 integers?

24 Nov 2019, Slot 2, Q67

- (A) 3.5 (B) 5
(C) 4.5 (D) 4

174. Amal invests Rs 12000 at 8% interest, compounded annually, and Rs 10000 at 6% interest, compounded semi-annually, both investments being for one year. Bimal invests his money at 7.5% simple interest for one year. If Amal and Bimal get the same amount of interest, then the amount, in Rupees, invested by Bimal is

24 Nov 2019, Slot 2, Q68

Type in the answer.

175. Two ants A and B start from a point P on a circle at the same time, with A moving clock-wise and B moving anti-clockwise. They meet for the first time at 10:00 am when A has covered 60% of the track. If A returns to P at 10:12 am, then B returns to P at

24 Nov 2019, Slot 2, Q71

- (A) 10:25 am (B) 10:45 am
(C) 10:18 am (D) 10:27 am

176. The strength of a salt solution is $p\%$ if 100 ml of the solution contains p grams of salt. Each of three vessels A, B, C contains 500 ml of salt solution of strengths 10%, 22%, and 32%, respectively. Now, 100 ml of the solution in vessel A is transferred to vessel B. Then, 100 ml of the solution in vessel B is transferred to vessel C. Finally, 100 ml of the solution in vessel C is transferred to vessel A. The strength, in percentage, of the resulting solution in vessel A is

24 Nov 2019, Slot 2, Q80

- (A) 15 (B) 13
(C) 12 (D) 14

177. A cyclist leaves A at 10 am and reaches B at 11 am. Starting from 10:01 am, every minute a motorcycle leaves A and moves towards B. Forty-five such motorcycles reach B by 11 am. All motorcycles have the same speed. If the cyclist had doubled his speed, how many motorcycles would have reached B by the time the cyclist reached B?

24 Nov 2019, Slot 2, Q81

- (A) 22 (B) 23
(C) 15 (D) 20

178. John jogs on track A at 6 kmph and Mary jogs on track B at 7.5 kmph. The total length of tracks A and B is 325 metres. While John makes 9 rounds of track A, Mary makes 5 rounds of track B. In how

many seconds will Mary make one round of track A?

24 Nov 2019, Slot 2, Q86

Type in the answer.

179. John gets Rs 57 per hour of regular work and Rs 114 per hour of overtime work. He works altogether 172 hours and his income from overtime hours is 15% of his income from regular hours. Then, for how many hours did he work overtime?

24 Nov 2019, Slot 2, Q88

Type in the answer.

180. A shopkeeper sells two tables, each procured at cost price p , to Amal and Asim at a profit of 20% and at a loss of 20%, respectively. Amal sells his table to Bimal at a profit of 30%, while Asim sells his table to Barun at a loss of 30%. If the amounts paid by Bimal and Barun are x and y , respectively, then $(x - y) / p$ equals

24 Nov 2019, Slot 2, Q90

- | | |
|----------|---------|
| (A) 1 | (B) 1.2 |
| (C) 0.50 | (D) 0.7 |

181. Mukesh purchased 10 bicycles in 2017, all at the same price. He sold six of these at a profit of 25% and the remaining four at a loss of 25%. If he made a total profit of Rs. 2000, then his purchase price of a bicycle, in Rupees, was

24 Nov 2019, Slot 2, Q94

- | | |
|----------|----------|
| (A) 6000 | (B) 8000 |
| (C) 4000 | (D) 2000 |

182. In an examination, the score of A was 10% less than that of B, the score of B was 25% more than that of C, and the score of C was 20% less than that of D. If A scored 72, then the score of D was

24 Nov 2019, Slot 2, Q95

Type in the answer.

183. The salaries of Ramesh, Ganesh and Rajesh were in the ratio 6:5:7 in 2010, and in the ratio 3:4:3 in 2015. If Ramesh's salary increased by 25% during 2010-2015, then the percentage increase in Rajesh's salary during this period is closest to

24 Nov 2019, Slot 2, Q96

- | | |
|--------|-------|
| (A) 10 | (B) 7 |
| (C) 9 | (D) 8 |

184. Anil alone can do a job in 20 days while Sunil alone can do it in 40 days. Anil starts the job, and after 3 days, Sunil joins him. Again, after a few more days, Bimal joins them and they together finish the job. If Bimal has done 10% of the job, then in how many days was the job done?

24 Nov 2019, Slot 2, Q99

- | | |
|--------|--------|
| (A) 12 | (B) 13 |
| (C) 15 | (D) 14 |

185. In an examination, Rama's score was one-twelfth of the sum of the scores of Mohan and Anjali. After a review, the score of each of them increased by 6. The revised scores of Anjali, Mohan, and Rama were in the ratio 11:10:3. Then Anjali's score exceeded Rama's score by

24 Nov 2019, Slot 2, Q100

(A) 26

(B) 32

(C) 35

(D) 24

186. Humans and robots can both perform a job but at different efficiencies. Fifteen humans and five robots working together take thirty days to finish the job, whereas five humans and fifteen robots working together take sixty days to finish it. How many days will fifteen humans working together (without any robot) take to finish it?

25 Nov 2018, Slot 1, Q69

- (A) 45 (B) 36
(C) 32 (D) 40

187. Point P lies between points A and B such that the length of BP is thrice that of AP. Car 1 starts from A and moves towards B. Simultaneously, car 2 starts from B and moves towards A. Car 2 reaches P one hour after car 1 reaches P. If the speed of car 2 is half that of car 1, then the time, in minutes, taken by car 1 in reaching P from A is

25 Nov 2018, Slot 1, Q72

Type in the answer.

188. Train T leaves station X for station Y at 3 pm. Train S, traveling at three quarters of the speed of T, leaves Y for X at 4 pm. The two trains pass each other at a station Z, where the distance between X and Z is three-fifths of that between X and Y. How many hours does train T take for its journey from X to Y?

25 Nov 2018, Slot 1, Q75

Type in the answer.

189. Two types of tea, A and B, are mixed and then sold at Rs. 40 per kg. The profit is 10% if A and B are mixed in the ratio 3 : 2, and 5% if this ratio is 2 : 3. The cost prices, per kg, of A and B are in the ratio

25 Nov 2018, Slot 1, Q76

- (A) 17 : 25 (B) 18 : 25
(C) 19 : 24 (D) 21 : 25

190. John borrowed Rs. 2,10,000 from a bank at an interest rate of 10% per annum, compounded annually. The loan was repaid in two equal instalments, the first after one year and the second after another year. The first instalment was interest of one year plus part of the principal amount, while the second was the rest of the principal amount plus due interest thereon. Then each instalment, in Rs., is

25 Nov 2018, Slot 1, Q79

Type in the answer.

191. When they work alone, B needs 25% more time to finish a job than A does. They two finish the job in 13 days in the following manner: A works alone till half the job is done, then A and B work together for four days, and finally B works alone to complete the remaining 5% of the job. In how many days can B alone finish the entire job?

25 Nov 2018, Slot 1, Q80

- (A) 20 (B) 22
(C) 16 (D) 18

192. Raju and Lalitha originally had marbles in the ratio 4:9. Then Lalitha gave some of her marbles to Raju. As a result, the ratio of the number of marbles with Raju to that with Lalitha became 5:6. What fraction of her original number of marbles was given by Lalitha to Raju?

25 Nov 2018, Slot 1, Q83

- (A) $\frac{1}{5}$ (B) $\frac{6}{19}$
(C) $\frac{1}{4}$ (D) $\frac{7}{33}$

193. A wholesaler bought walnuts and peanuts, the price of walnut per kg being thrice that of peanut per kg. He then sold 8 kg of peanuts at a profit of 10% and 16 kg of walnuts at a profit of 20% to a shopkeeper. However, the shopkeeper lost 5 kg of walnuts and 3 kg of peanuts in transit. He then mixed the remaining nuts and sold the mixture at Rs. 166 per kg, thus making an overall profit of 25%. At what price, in Rs. per kg, did the wholesaler buy the walnuts?

25 Nov 2018, Slot 1, Q85

- (A) 96 (B) 98
(C) 86 (D) 84

194. In an apartment complex, the number of people aged 51 years and above is 30 and there are at most 39 people whose ages are below 51 years. The average age of all the people in the apartment complex is 38 years. What is the largest possible average age, in years, of the people whose ages are below 51 years?

25 Nov 2018, Slot 1, Q88

- (A) 27 (B) 25
(C) 26 (D) 28

195. A trader sells 10 litres of a mixture of paints A and B, where the amount of B in the mixture does not exceed that of A. The cost of paint A per litre is Rs. 8 more than that of paint B. If the trader sells the entire mixture for Rs. 264 and makes a profit of 10%, then the highest possible cost of paint B, in Rs. per litre, is

25 Nov 2018, Slot 1, Q89

- (A) 16 (B) 26
(C) 20 (D) 22

196. The distance from A to B is 60 km. Partha and Narayan start from A at the same time and move towards B. Partha takes four hours more than Narayan to reach B. Moreover, Partha reaches the mid-point of A and B two hours before Narayan reaches B. The speed of Partha, in km per hour, is

25 Nov 2018, Slot 1, Q93

- (A) 6 (B) 4
(C) 3 (D) 5

197. A tank is fitted with pipes, some filling it and the rest draining it. All filling pipes fill at the same rate, and all draining pipes drain at the same rate. The empty tank gets completely filled in 6 hours when 6 filling and 5 draining pipes are on, but this time becomes 60 hours when 5 filling and 6 draining pipes are on. In how many hours will the empty tank get completely filled

when one draining and two filling pipes are on?

25 Nov 2018, Slot 1, Q96

Type in the answer.

198. A CAT aspirant appears for a certain number of tests. His average score increases by 1 if the first 10 tests are not considered, and decreases by 1 if the last 10 tests are not considered. If his average scores for the first 10 and the last 10 tests are 20 and 30, respectively, then the total number of tests taken by him is

25 Nov 2018, Slot 1, Q98

Type in the answer.

199. In an examination, the maximum possible score is N while the pass mark is 45% of N . A candidate obtains 36 marks, but falls short of the pass mark by 68%. Which one of the following is then correct?

25 Nov 2018, Slot 1, Q100

- | | |
|-----------------------------|-----------------------------|
| (A) $N \leq 200$. | (B) $243 \leq N \leq 252$. |
| (C) $201 \leq N \leq 242$. | (D) $N \geq 253$. |
-

CAT 2018 Slot 2 - Questions 200-211

200. A water tank has inlets of two types A and B. All inlets of type A when open, bring in water at the same rate. All inlets of type B, when open, bring in water at the same rate. The empty tank is completely filled in 30 minutes if 10 inlets of type A and 45 inlets of type B are open, and in 1 hour if 8 inlets of type A and 18 inlets of type B are open. In how many minutes will the empty tank get completely filled if 7 inlets of type A and 27 inlets of type B are open?

25 Nov 2018, Slot 2, Q67

Type in the answer.

201. Points A, P, Q and B lie on the same line such that P, Q and B are, respectively, 100 km, 200 km and 300 km away from A. Cars 1 and 2 leave A at the same time and move towards B. Simultaneously, car 3 leaves B and moves towards A. Car 3 meets car 1 at Q, and car 2 at P. If each car is moving in uniform speed then the ratio of the speed of car 2 to that of car 1 is

25 Nov 2018, Slot 2, Q69

- (A) 2 : 7
(B) 2 : 9
(C) 1 : 2
(D) 1 : 4

202. A 20% ethanol solution is mixed with another ethanol solution, say, S of unknown concentration in the proportion 1:3 by volume. This mixture is then mixed with an equal volume of 20% ethanol solution. If the resultant mixture is a 31.25% ethanol solution, then the unknown concentration of S is

25 Nov 2018, Slot 2, Q75

- (A) 30%
(B) 40%
(C) 50%
(D) 60%

203. A tank is emptied everyday at a fixed time point. Immediately thereafter, either pump A or pump B or both start working until the tank is full. On Monday, A alone completed filling the tank at 8 pm. On Tuesday, B alone completed filling the tank at 6 pm. On Wednesday, A alone worked till 5 pm, and then B worked alone from 5 pm to 7 pm, to fill the tank. At what time was the tank filled on Thursday if both pumps were used simultaneously all along?

25 Nov 2018, Slot 2, Q81

- (A) 4:48 pm
(B) 4:12 pm
(C) 4:24 pm
(D) 4:36 pm

204. The arithmetic mean of x , y and z is 80, and that of x , y , z , u and v is 75, where $u = (x+y)/2$ and $v = (y+z)/2$. If $x \geq z$, then the minimum possible value of x is

25 Nov 2018, Slot 2, Q82

Type in the answer.

205. Points A and B are 150 km apart. Cars 1 and 2 travel from A to B, but car 2 starts from A when car 1 is already 20 km away from A. Each car travels at a speed of 100 kmph for the first 50 km, at 50 kmph for the next 50 km, and at 25 kmph for the last 50 km. The distance, in

km, between car 2 and B when car 1 reaches B is

25 Nov 2018, Slot 2, Q83

Type in the answer.

206. A jar contains a mixture of 175 ml water and 700 ml alcohol. Gopal takes out 10% of the mixture and substitutes it by water of the same amount. The process is repeated once again. The percentage of water in the mixture is now

25 Nov 2018, Slot 2, Q91

- (A) 30.3 (B) 35.2
(C) 25.4 (D) 20.5

207. There are two drums, each containing a mixture of paints A and B. In drum 1, A and B are in the ratio 18 : 7. The mixtures from drums 1 and 2 are mixed in the ratio 3 : 4 and in this final mixture, A and B are in the ratio 13 : 7. In drum 2, then A and B were in the ratio

25 Nov 2018, Slot 2, Q95

- (A) 251 : 163 (B) 239 : 161
(C) 220 : 149 (D) 229 : 141

208. Ramesh and Ganesh can together complete a work in 16 days. After seven days of working together, Ramesh got sick and his efficiency fell by 30%. As a result, they completed the work in 17 days instead of 16 days. If Ganesh had worked alone after Ramesh got sick, in how many days would he have completed the remaining work?

25 Nov 2018, Slot 2, Q96

- (A) 14.5 (B) 11
(C) 13.5 (D) 12

209. Gopal borrows Rs. X from Ankit at 8% annual interest. He then adds Rs. Y of his own money and lends Rs. X+Y to Ishan at 10% annual interest. At the end of the year, after returning Ankit's dues, the net interest retained by Gopal is the same as that accrued to Ankit. On the other hand, had Gopal lent Rs. X+2Y to Ishan at 10%, then the net interest retained by him would have increased by Rs. 150. If all interests are compounded annually, then find the value of X + Y.

25 Nov 2018, Slot 2, Q97

Type in the answer.

210. The strength of a salt solution is p% if 100 ml of the solution contains p grams of salt. If three salt solutions A, B, C are mixed in the proportion 1 : 2 : 3, then the resulting solution has strength 20%. If instead the proportion is 3 : 2 : 1, then the resulting solution has strength 30%. A fourth solution, D, is produced by mixing B and C in the ratio 2 : 7. The ratio of the strength of D to that of A is

25 Nov 2018, Slot 2, Q98

- (A) 3 : 10 (B) 1 : 3
(C) 1 : 4 (D) 2 : 5

211. On a long stretch of east-west road, A and B are two points such that B is 350 km west of A. One car starts from A and another from B at the same time. If they move towards each other, then they meet

after 1 hour. If they both move towards east, then they meet in 7 hrs. The difference between their speeds, in km per hour, is

25 Nov 2018, Slot 2, Q99

Type in the answer.

CAT 2017 Slot 1 - Questions 212-224

212. Arun's present age in years is 40% of Barun's. In another few years, Arun's age will be half of Barun's. By what percentage will Barun's age increase during this period?

26 Nov 2017, Slot 1, Q67

Type in the answer.

213. A person can complete a job in 120 days. He works alone on Day 1. On Day 2, he is joined by another person who also can complete the job in exactly 120 days. On Day 3, they are joined by another person of equal efficiency. Like this, everyday a new person with the same efficiency joins the work. How many days are required to complete the job?

26 Nov 2017, Slot 1, Q68

Type in the answer.

214. An elevator has a weight limit of 630 kg. It is carrying a group of people of whom the heaviest weighs 57 kg and the lightest weighs 53 kg. What is the maximum possible number of people in the group?

26 Nov 2017, Slot 1, Q69

Type in the answer.

215. A man leaves his home and walks at a speed of 12 km per hour, reaching the railway station 10 minutes after the train had departed. If instead he had walked at a speed of 15 km per hour, he would have reached the station 10 minutes before the train's departure. The distance (in km) from his home to the railway station is

26 Nov 2017, Slot 1, Q70

Type in the answer.

216. Ravi invests 50% of his monthly savings in fixed deposits. Thirty percent of the rest of his savings is invested in stocks and the rest goes into Ravi's savings bank account. If the total amount deposited by him in the bank (for savings account and fixed deposits) is Rs 59500, then Ravi's total monthly savings (in Rs) is

26 Nov 2017, Slot 1, Q71

Type in the answer.

217. If a seller gives a discount of 15% on retail price, she still makes a profit of 2%. Which of the following ensures that she makes a profit of 20%?

26 Nov 2017, Slot 1, Q72

- | | |
|--|--|
| (A) Give a discount of 5% on retail price. | (B) Give a discount of 2% on retail price. |
| (C) Increase the retail price by 2%. | (D) Sell at retail price. |

218. A man travels by a motor boat down a river to his office and back. With the speed of the river unchanged, if he doubles the speed of his motor boat, then his total travel time gets reduced by 75%. The ratio of the original speed of the motor boat to the speed of the river is

(A) $\sqrt{6} : \sqrt{2}$

(B) $\sqrt{7} : 2$

(C) $2\sqrt{5} : 3$

(D) 3:2

219. Suppose, C1, C2, C3, C4, and C5 are five companies. The profits made by C1, C2, and C3 are in the ratio 9 : 10 : 8 while the profits made by C2, C4, and C5 are in the ratio 18 : 19 : 20. If C5 has made a profit of Rs 19 crore more than C1, then the total profit (in Rs) made by all five companies is

26 Nov 2017, Slot 1, Q74

(A) 438 crore

(B) 435 crore

(C) 348 crore

(D) 345 crore

220. The number of girls appearing for an admission test is twice the number of boys. If 30% of the girls and 45% of the boys get admission, the percentage of candidates who do not get admission is

26 Nov 2017, Slot 1, Q75

(A) 35

(B) 50

(C) 60

(D) 65

221. A stall sells popcorn and chips in packets of three sizes: large, super, and jumbo. The numbers of large, super, and jumbo packets in its stock are in the ratio 7 : 17 : 16 for popcorn and 6 : 15 : 14 for chips. If the total number of popcorn packets in its stock is the same as that of chips packets, then the numbers of jumbo popcorn packets and jumbo chips packets are in the ratio

26 Nov 2017, Slot 1, Q76

(A) 1 : 1

(B) 8 : 7

(C) 4 : 3

(D) 6 : 5

222. In a market, the price of medium quality mangoes is half that of good mangoes. A shopkeeper buys 80 kg good mangoes and 40 kg medium quality mangoes from the market and then sells all these at a common price which is 10% less than the price at which he bought the good ones. His overall profit is

26 Nov 2017, Slot 1, Q77

(A) 6%

(B) 8%

(C) 10%

(D) 12%

223. If Fatima sells 60 identical toys at a 40% discount on the printed price, then she makes 20% profit. Ten of these toys are destroyed in fire. While selling the rest, how much discount should be given on the printed price so that she can make the same amount of profit?

26 Nov 2017, Slot 1, Q78

(A) 30%

(B) 25%

(C) 24%

(D) 28%

224. A class consists of 20 boys and 30 girls. In the mid-semester examination, the average score of the girls was 5 higher than that of the boys. In the final exam, however, the average score of the girls dropped by 3 while the average score of the entire class increased by 2. The increase in the average score of the boys is

(A) 9.5

(B) 10

(C) 4.5

(D) 6

CAT 2017 Slot 2 - Questions 225-237

225. In a 10 km race, A, B, and C, each running at uniform speed, get the gold, silver, and bronze medals, respectively. If A beats B by 1 km and B beats C by 1 km, then by how many metres does A beat C?

26 Nov 2017, Slot 2, Q68

Type in the answer.

226. Bottle 1 contains a mixture of milk and water in 7: 2 ratio and Bottle 2 contains a mixture of milk and water in 9: 4 ratio. In what ratio of volumes should the liquids in Bottle 1 and Bottle 2 be combined to obtain a mixture of milk and water in 3:1 ratio?

26 Nov 2017, Slot 2, Q69

- (A) 27:14 (B) 27:13
(C) 27:16 (D) 27:18

227. Arun drove from home to his hostel at 60 miles per hour. While returning home he drove half way along the same route at a speed of 25 miles per hour and then took a bypass road which increased his driving distance by 5 miles, but allowed him to drive at 50 miles per hour along this bypass road. If his return journey took 30 minutes more than his onward journey, then the total distance traveled by him is

26 Nov 2017, Slot 2, Q70

- (A) 55 miles (B) 60 miles
(C) 65 miles (D) 70 miles

228. Out of the shirts produced in a factory, 15% are defective, while 20% of the rest are sold in the domestic market. If the remaining 8840 shirts are left for export, then the number of shirts produced in the factory is

26 Nov 2017, Slot 2, Q71

- (A) 13600 (B) 13000
(C) 13400 (D) 14000

229. The average height of 22 toddlers increases by 2 inches when two of them leave this group. If the average height of these two toddlers is one-third the average height of the original 22, then the average height, in inches, of the remaining 20 toddlers is

26 Nov 2017, Slot 2, Q72

- (A) 30 (B) 28
(C) 32 (D) 26

230. The manufacturer of a table sells it to a wholesale dealer at a profit of 10%. The wholesale dealer sells the table to a retailer at a profit of 30%. Finally, the retailer sells it to a customer at a profit of 50%. If the customer pays Rs 4290 for the table, then its manufacturing cost (in Rs) is

26 Nov 2017, Slot 2, Q73

- (A) 1500 (B) 2000
(C) 2500 (D) 3000

231. A tank has an inlet pipe and an outlet pipe. If the outlet pipe is closed then the inlet pipe fills the empty tank in 8 hours. If the outlet pipe is open then the inlet pipe fills the empty tank in 10 hours. If only the outlet pipe is open then in how many hours the full tank becomes half-full?

26 Nov 2017, Slot 2, Q74

- | | |
|--------|--------|
| (A) 20 | (B) 30 |
| (C) 40 | (D) 45 |

232. Mayank buys some candies for Rs 15 a dozen and an equal number of different candies for Rs 12 a dozen. He sells all for Rs 16.50 a dozen and makes a profit of Rs 150. How many dozens of candies did he buy altogether?

26 Nov 2017, Slot 2, Q75

- | | |
|--------|--------|
| (A) 50 | (B) 30 |
| (C) 25 | (D) 45 |

233. In a village, the production of food grains increased by 40% and the per capita production of food grains increased by 27% during a certain period. The percentage by which the population of the village increased during the same period is nearest to

26 Nov 2017, Slot 2, Q76

- | | |
|--------|--------|
| (A) 16 | (B) 13 |
| (C) 10 | (D) 7 |

234. If a , b , c are three positive integers such that a and b are in the ratio 3 : 4 while b and c are in the ratio 2:1, then which one of the following is a possible value of $(a + b + c)$?

26 Nov 2017, Slot 2, Q77

- | | |
|---------|---------|
| (A) 201 | (B) 205 |
| (C) 207 | (D) 210 |

235. A motorbike leaves point A at 1 pm and moves towards point B at a uniform speed. A car leaves point B at 2 pm and moves towards point A at a uniform speed which is double that of the motorbike. They meet at 3:40 pm at a point which is 168 km away from A. What is the distance, in km, between A and B?

26 Nov 2017, Slot 2, Q78

- | | |
|---------|---------|
| (A) 364 | (B) 378 |
| (C) 380 | (D) 388 |

236. Amal can complete a job in 10 days and Bimal can complete it in 8 days. Amal, Bimal and Kamal together complete the job in 4 days and are paid a total amount of Rs 1000 as remuneration. If this amount is shared by them in proportion to their work, then Kamal's share, in rupees, is

26 Nov 2017, Slot 2, Q79

- | | |
|---------|---------|
| (A) 100 | (B) 200 |
| (C) 300 | (D) 400 |

237. Consider three mixtures — the first having water and liquid A in the ratio 1:2, the second having water and liquid B in the ratio 1:3, and the third having water and liquid C in the ratio 1:4. These three mixtures of A, B, and C, respectively, are further mixed in the proportion 4: 3: 2. Then the resulting mixture has

26 Nov 2017, Slot 2, Q80

- (A) The same amount of water and liquid B (B) The same amount of liquids B and C
(C) More water than liquid B (D) More water than liquid A
-

CAT 2007 - Questions 238-239

238. Consider the set $S = \{2, 3, 4, \dots, 2n+1\}$, where n is a positive integer larger than 2007. Define X as the average of the odd integers in S and Y as the average of the even integers in S . What is the value of $X - Y$?

18 Nov 2007, Q1

- | | |
|---------------|----------------|
| (A) 0 | (B) 1 |
| (C) $(1/2)^n$ | (D) $(n+1)/2n$ |
| (E) 2008 | |
-

239. Ten years ago, the ages of the members of a joint family of eight people added up to 231 years. Three years later, one member died at the age of 60 years and a child was born during the same year. After another three years, one more member died, again at 60, and a child was born during the same year. The current average age of this eight-member joint family is nearest to

18 Nov 2007, Q2

- | | |
|--------------|--------------|
| (A) 23 years | (B) 22 years |
| (C) 21 years | (D) 25 years |
| (E) 24 years | |
-

CAT 2006 - Questions 240-241

240. If $a/b = 1/3$, $b/c = 2$, $c/d = 1/2$, $d/e = 3$ and $e/f = 1/4$, then what is the value of abc/def ?

19 Nov 2006, Q51

- (A) $3/8$ (B) $27/8$
(C) $3/4$ (D) $27/4$
(E) $1/4$
-

241. Arun, Barun and Kiranmala start from the same place and travel in the same direction at speeds of 30, 40 and 60 km per hour respectively. Barun starts two hours after Arun. If Barun and Kiranmala overtake Arun at the same instant, how many hours after Arun did Kiranmala start?

19 Nov 2006, Q75

- (A) 3 (B) 3.5
(C) 4 (D) 4.5
(E) 5
-

CAT 2005 - Questions 242-244

242. A chemical plant has four tanks (A, B, C, and D), each containing 1000 litres of a chemical. The chemical is being pumped from one tank to another as follows: From A to B @ 20 litres/minute From C to A @ 90 litres/minute From A to D @ 10 litres/minute From C to D @ 50 litres/minute From B to C @ 100 litres/minute From D to B @ 110 litres/minute Which tank gets emptied first, and how long does it take (in minutes) to get empty after pumping starts?

20 Nov 2005, Q2

- (A) A,16.66 (B) C,20
(C) D,20 (D) D,25

Questions 243 to 244

Ram and Shyam run a race between points A and B, 5 km apart. Ram starts at 9 a.m. from A at a speed of 5 km/hr, reaches B, and returns to A at the same speed. Shyam starts at 9:45 a.m. from A at a speed of 10 km/hr, reaches B and comes back to A at the same speed.

243. At what time do Ram and Shyam first meet each other?

20 Nov 2005, Q6

- (A) 10 a.m. (B) 10:10 a.m.
(C) 10:20 a.m. (D) 10:30 a.m.

244. At what time does Shyam overtake Ram?

20 Nov 2005, Q7

- (A) 10:20 a.m. (B) 10:30 a.m.
(C) 10:40 a.m. (D) 10:50 a.m.

CAT 2004 - Questions 245-250

245. Two boats, traveling at 5 and 10 kms per hour, head directly towards each other. They begin at a distance of 20 kms from each other. How far apart are they (in kms) one minute before they collide.

21 Nov 2004, Q39

- (A) $1/12$ (B) $1/6$
(C) $1/4$ (D) $1/3$

246. If a man cycles at 10 km/hr, then he arrives at a certain place at 1 p.m. If he cycles at 15 km/hr, he will arrive at the same place at 11 a.m. At what speed must he cycle to get there at noon?

21 Nov 2004, Q42

- (A) 11 km/hr (B) 12 km/hr
(C) 13 km/hr (D) 14 km/hr

247. A milkman mixes 20 litres of water with 80 litres of milk. After selling one-fourth of this mixture, he adds water to replenish the quantity that he had sold. What is the current proportion of water to milk?

21 Nov 2004, Q46

- (A) 2 : 3 (B) 1 : 2
(C) 1 : 3 (D) 3 : 4

248. Karan and Arjun run a 100-meter race, where Karan beats Arjun 10 metres. To do a favour to Arjun, Karan starts 10 metres behind the starting line in a second 100 metre race. They both run at their earlier speeds. Which of the following is true in connection with the second race?

21 Nov 2004, Q49

- (A) Karan and Arjun reach the finishing line simultaneously.
(B) Arjun beats Karan by 1 metre
(C) Arjun beats Karan by 11 metres.
(D) Karan beats Arjun by 1 metre.

249. In NutsAndBolts factory, one machine produces only nuts at the rate of 100 nuts per minute and needs to be cleaned for 5 minutes after production of every 1000 nuts. Another machine produces only bolts at the rate of 75 bolts per minute and needs to be cleaned for 10 minutes after production of every 1500 bolts. If both the machines start production at the same time, what is the minimum duration required for producing 9000 pairs of nuts and bolts?

21 Nov 2004, Q51

- (A) 130 minutes (B) 135 minutes
(C) 170 minutes (D) 180 minutes

250. A sprinter starts running on a circular path of radius r metres. Her average speed (in metres/minute) is πr during the first 30 seconds, $\pi r/2$ during next one minute, $\pi r/4$ during next 2 minutes, $\pi r/8$ during next 4 minutes, and so on. What is the ratio of the time taken for

the n th round to that for the previous round?

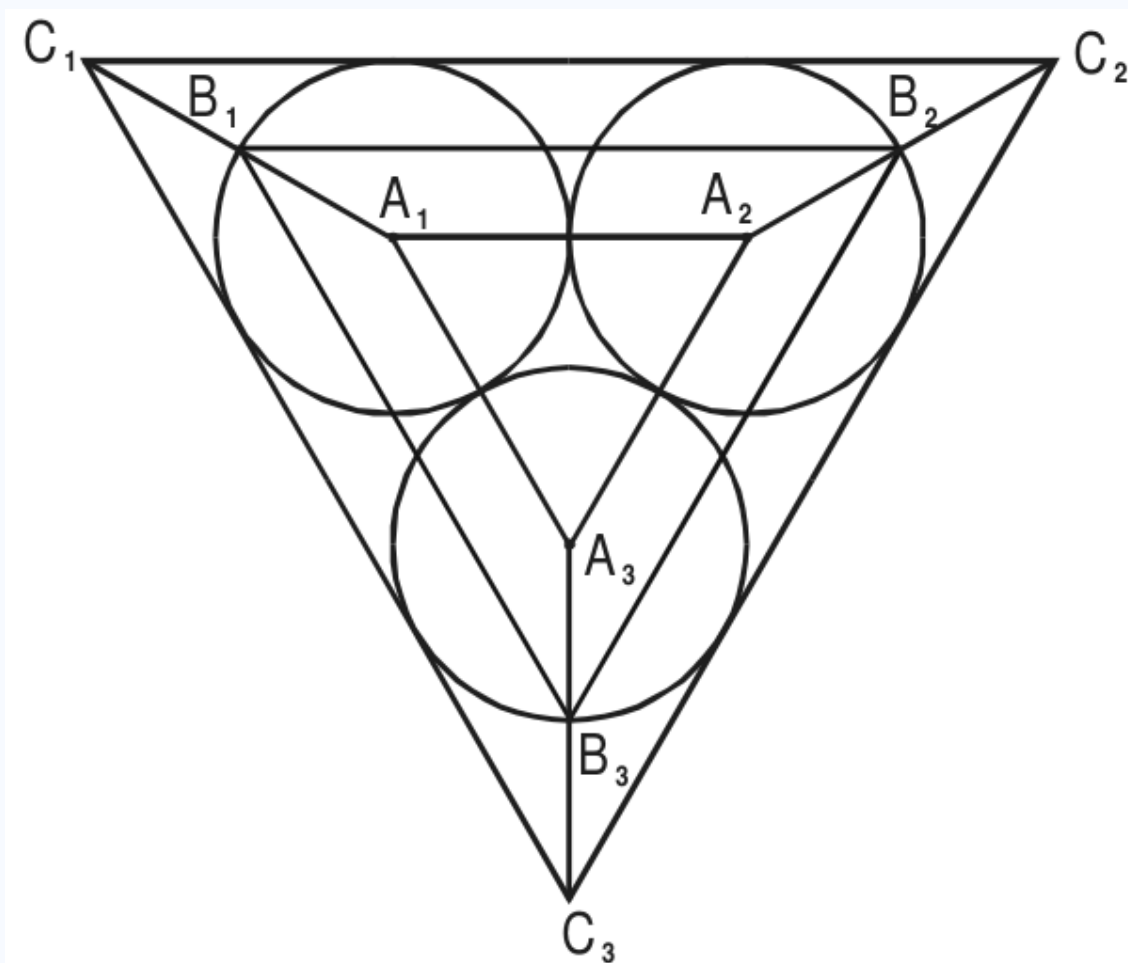
21 Nov 2004, Q61

- (A) 4 (B) 8
(C) 16 (D) 32
-

Questions 251 to 252

Directions for Questions 251 to 252: Answer the questions on the basis of the information given below.

Consider three circular parks of equal size with centres at A_1 , A_2 , and A_3 respectively. The parks touch each other at the edge as shown in the figure (not drawn to scale). There are three paths formed by the triangles $A_1A_2A_3$, $B_1B_2B_3$, and $C_1C_2C_3$, as shown. Three sprinters A, B and C begin running from points A_1 , B_1 and C_1 respectively. Each sprinter traverses her respective triangular path clockwise and returns to her starting point.



251. Sprinter A traverses distances A_1A_2 , A_2A_3 , and A_3A_1 at average speeds of 20, 30 and 15 respectively. B traverses her entire path at a uniform speed of $(10\sqrt{3} + 20)$. C traverses distances C_1C_2 , C_2C_3 and C_3C_1 at average speeds of $\frac{40}{3}(\sqrt{3} + 1)$, $\frac{40}{3}(\sqrt{3} + 1)$ and 120 respectively. All speeds are in the same unit. Where would B and C respectively be when A finishes her sprint?

15 Feb 2004, CAT 2003 Re-test, Q55

(A) B_1, C_1

(B) B_2, C_3

(C) B_1, C_3

(D) B_1 , Somewhere between C_3 and C_1

252. Sprinters A, B and C traverse their respective paths at uniform speeds of u , v and w respectively. It is known that $u^2:v^2:w^2$ is equal to Area A : Area B : Area C, where Area A, Area B and Area C are the areas of triangles $A_1A_2A_3$, $B_1B_2B_3$ and $C_1C_2C_3$ respectively. Where would A and C be when B reaches point B_3 ?

15 Feb 2004, CAT 2003 Re-test, Q56

(A) A_2, C_3

(B) A_3, C_3

(C) A_3, C_2

(D) Somewhere between A_2 and A_3 , Somewhere between C_3 and C_1

253. In a 4000 meter race around a circular stadium having a circumference of 1000 meters, the fastest runner and the slowest runner reach the same point at the end of the 5th minute, for the first time after the start of the race. All the runners have the same starting point and each runner maintains a uniform speed throughout the race. If the fastest runner runs at twice the speed of the slowest runner, what is the time taken by the fastest runner to finish the race?

23 Nov 2003, CAT 2003 Original sitting, Q120

- | | |
|------------|------------|
| (A) 20 min | (B) 15 min |
| (C) 10 min | (D) 5 min |
-

254. At the end of year 1998, Shepard bought nine dozen goats. Henceforth, every year he added $p\%$ of the goats at the beginning of the year and sold $q\%$ of the goats at the end of the year where $p > 0$ and $q > 0$. If Shepard had nine dozen goats at the end of year 2002, after making the sales for that year, which of the following is true?

23 Nov 2003, CAT 2003 Original sitting, Q126

- | | |
|-------------|---------------|
| (A) $p = q$ | (B) $p < q$ |
| (C) $p > q$ | (D) $p = q/2$ |
-

CAT 2002 - Questions 255-262

255. On a straight road XY, 100 m long, five heavy stones are placed 2 m apart beginning at the end X. A worker, starting at X, has to transport all the stones to Y, by carrying only one stone at a time. The minimum distance he has to travel is

CAT 2002, Q56

- (A) 472 m (B) 422 m
(C) 744 m (D) 860 m

256. Only a single rail track exists between stations A and B on a railway line. One hour after the north-bound super fast train N leaves station A for station B, a south-bound passenger train S reaches station A from station B. The speed of the super fast train is twice that of a normal express train E, while the speed of a passenger train S is half that of E. On a particular day, N leaves for B from A, 20 min behind the normal schedule. In order to maintain the schedule, both N and S increased their speeds. If the super fast train doubles its speed, what should be the ratio (approximately) of the speeds of passenger train to that of the super fast train so that the passenger train S reaches exactly at the scheduled time at A on that day?

CAT 2002, Q60

- (A) 1 : 3 (B) 1 : 4
(C) 1 : 5 (D) 1 : 6

257. On a 20 km tunnel, connecting two cities A and B, there are three gutters (1, 2 and 3). The distance between gutters 1 and 2 is half the distance between gutters 2 and 3. The distance from city A to its nearest gutter, gutter 1, is equal to the distance of city B from gutter 3. On a particular day, the hospital in city A receives information that an accident has happened at gutter 3. The victim can be saved only if an operation is started within 40 min. An ambulance started from city A at 30 km/hr and crossed gutter 1 after 5 min. If the driver had doubled the speed after that, what is the maximum amount of time would the doctor get to attend to the patient at the hospital. Assume that a total of 1 min is elapsed for taking the patient into and out of the ambulance?

CAT 2002, Q61

- (A) 4 min (B) 2.5 min
(C) 1.5 min (D) The patient died before reaching the hospital

258. Amol was asked to calculate the arithmetic mean of 10 positive integers, each of which had 2 digits. By mistake, he interchanged the 2 digits, say a and b, in one of these 10 integers. As a result, his answer for the arithmetic mean was 1.8 more than what it should have been. Then $|b - a|$ equals

CAT 2002, Q72

- (A) 1 (B) 2
(C) 3 (D) None of these

259. A train approaches a tunnel AB. Inside the tunnel is a cat located at a point that is $\frac{3}{8}$ of the distance AB measured from the entrance A. When the train whistles the cat runs. If the cat moves to the entrance of the tunnel A, the train catches the cat exactly at the entrance. If the cat moves to the exit B, the train catches the cat at exactly the exit. What is the ratio of speed of train and cat ?

- (A) 3 : 1
(C) 5 : 1
- (B) 4 : 1
(D) None of these
-

260. Three travellers are sitting around a fire, and are about to eat a meal. One of them has 5 small loaves of bread, the second has 3 small loaves of bread. The third has no food, but has 8 coins. He offers to pay for some bread. They agree to share the 8 loaves equally among the three travellers, and the third traveller will pay 8 coins for his share of the 8 loaves. All loaves were the same size. The second traveller (who had 3 loaves) suggests that he will be paid 3 coins, and that the first traveller be paid 5 coins. The first traveller says that he should get more than 5 coins. How much should the first traveller get?

CAT 2002, Q89

- (A) 5
(C) 1
- (B) 7
(D) None of these
-

261. It takes six technicians a total of 10 hr to build a new server from Direct Computer, with each working at the same rate. If six technicians start to build the server at 11 am, and one technician per hour is added beginning at 5 pm, at what time will the server be completed? [CAT 2002]

CAT 2002, Q95

- (A) 6.40 pm
(C) 7.20 pm
- (B) 7 pm
(D) 8 pm
-

262. Three small pumps and a large pump are filling a tank. Each of the three small pump works at $\frac{2}{3}$ the rate of the large pump. If all four pumps work at the same time, they should fill the tank in what fraction of the time that it would have taken the large pump alone?

CAT 2002, Q97

- (A) $\frac{4}{7}$
(C) $\frac{2}{3}$
- (B) $\frac{1}{3}$
(D) $\frac{3}{4}$
-

263. A student took five papers in an examination, where the full marks were the same for each paper. His marks in these papers were in the proportion of 6 : 7 : 8 : 9 : 10. In all papers together, the candidate obtained 60% of the total marks. Then the number of papers in which he got more than 50% marks is

CAT 2001, Q1

- (A) 2 (B) 3
(C) 4 (D) 5

264. A can complete a piece of work in 4 days. B takes double the time taken by A, C takes double that of B, and D takes double that of C to complete the same task. They are paired in groups of two each. One pair takes two-thirds the time needed by the second pair to complete the work. Which is the first pair?

CAT 2001, Q9

- (A) A and B (B) A and C
(C) B and C (D) A and D

265. A college has raised 75% of the amount it needs for a new building by receiving an average donation of Rs. 600 from the people already solicited. The people already solicited represent 60% of the people the college will ask for donations. If the college is to raise exactly the amount needed for the new building, what should be the average donation from the remaining people to be solicited?

CAT 2001, Q13

- (A) Rs. 300 (B) Rs. 250
(C) Rs. 400 (D) 500

266. Three friends, returning from a movie, stopped to eat at a restaurant. After dinner, they paid their bill and noticed a bowl of mints at the front counter. Sita took one-third of the mints, but returned four because she had a momentary pang of guilt. Fatima then took one-fourth of what was left but returned three for similar reason. Eswari then took half of the remainder but threw two back into the bowl. The bowl had only 17 mints left when the raid was over. How many mints were originally in the bowl?

CAT 2001, Q17

- (A) 38 (B) 31
(C) 41 (D) None of these

267. At his usual rowing rate, Rahul can travel 12 miles downstream in a certain river in 6 hr less than it takes him to travel the same distance upstream. But if he could double his usual rowing rate for this 24 miles round trip, the downstream 12 miles would then take only 1 hr less than the upstream 12 miles. What is the speed of the current in miles per hour?

CAT 2001, Q20

- (A) $\frac{7}{3}$ (B) $\frac{4}{3}$
(C) $\frac{5}{3}$ (D) $\frac{8}{3}$

268. Three classes X, Y and Z take an algebra test. The average score in class X is 83. The average score in class Y is 76. The average score in class Z is 85. The average score of all students in classes X and Y

together is 79. The average score of all students in classes Y and Z together is 81. What is the average for all the three classes?

CAT 2001, Q22

- (A) 81 (B) 81.5
(C) 82 (D) 84.5
-

269. Shyama and Vyom walk up an escalator (moving stairway). The escalator moves at a constant speed. Shyama takes three steps for every two of Vyom's steps. Shyama gets to the top of the escalator after having taken 25 steps, while Vyom (because his slower pace lets the escalator do a little more of the work) takes only 20 steps to reach the top. If the escalator were turned off, how many steps would they have to take to walk up?

CAT 2001, Q25

- (A) 40 (B) 50
(C) 60 (D) 80
-

270. There's a lot of work in preparing a birthday dinner. Even after the turkey is in the oven, there's still the potatoes and gravy, yams, salad, and cranberries, not to mention setting the table. Three friends — Asit, Arnold and Afzal — work together to get all of these chores done. The time it takes them to do the work together is 6 hr less than Asit would have taken working alone, 1 hr less than Arnold would have taken alone, and half the time Afzal would have taken working alone. How long did it take them to do these chores working together?

CAT 2001, Q28

- (A) 20 min (B) 30 min
(C) 40 min (D) 50 min
-

271. Fresh grapes contain 90% water by weight while dried grapes contain 20% water by weight and the remaining proportion being pulp. What is the weight of dry grapes available from 20 kg of fresh grapes?

CAT 2001, Q31

- (A) 2 kg (B) 2.4 kg
(C) 2.5 kg (D) None of these
-

272. Train X departs from station A at 11 a.m. for station B, which is 180 km so far. Train Y departs from station B at 11 a.m. for station A. Train X travels at an average speed of 70 km/hr and does not stop anywhere until it arrives at station B. Train Y travels at an average speed of 50 km/hr, but has to stop for 15 min at station C, which is 60 km away from station B enroute to station A. Ignoring the lengths of the trains, what is the distance, to the nearest kilometre, from station A to the point where the trains cross each other?

CAT 2001, Q32

- (A) 112 km (B) 118 km
(C) 120 km (D) None of these
-

273. A set of consecutive positive integers beginning with 1 is written on the blackboard. A student came along and erased one number. The average of the remaining

numbers is $\frac{602}{17}$. What was the number erased?

CAT 2001, Q33

- (A) 7 (B) 8
(C) 9 (D) None of these
-

274. The owner of an art shop conducts his business in the following manner: every once in a while he raises his prices by X%, then a while later he reduces all the new prices by X%. After one such updown cycle, the price of a painting decreased by Rs. 441. After a second up-down cycle the painting was sold for Rs. 1,944.81. What was the original price of the painting?

CAT 2001, Q35

- (A) Rs. 2,756.25 (B) Rs. 2,256.25
(C) Rs. 2,500 (D) Rs. 2,000
-

275. Three runners A, B and C run a race, with runner A finishing 12 m ahead of runner B and 18 m ahead of runner C, while runner B finishes 8 m ahead of runner C. Each runner travels the entire distance at a constant speed. What was the length of the race?

CAT 2001, Q36

- (A) 36 m (B) 48 m
(C) 60 m (D) 72 m
-

CAT 2000 - Questions 276-277

276. A truck travelling at 70 kilometres per hour uses 30% more diesel to travel a certain distance than it does when it travels at the speed of 50 kilometres per hour. If the truck can travel 19.5 kilometres on a litre of diesel at 50 kilometres per hour, how far can the truck travel on 10 litres of diesel at a speed of 70 kilometres per hour?

CAT 2000, Q60

- (A) 130
(B) 140
(C) 150
(D) 175

277. Consider a sequence of seven consecutive integers. The average of the first five integers is n . The average of all the seven integers is:

CAT 2000, Q61

- (A) n
(B) $n+1$
(C) kn , where k is a function of n
(D) $n + (2/7)$

CAT 1999 - Questions 278-280

278. The speed of a railway engine is 42 Km per hour when no compartment is attached, and the reduction in speed is directly proportional to the square root of the number of compartments attached. If the speed of the train carried by this engine is 24 Km per hour when 9 compartments are attached, the maximum number of compartments that can be carried by the engine is:

CAT 1999, Q61

- (A) 49 (B) 48
(C) 46 (D) 47
-

279. Forty percent of the employees of a certain company are men, and 75 percent of the men earn more than Rs. 25,000 per year. If 45 percent of the company's employees earn more than Rs. 25,000 per year, what fraction of the women employed by the company earn Rs. 25,000 year or less'?

CAT 1999, Q63

- (A) $\frac{2}{11}$ (B) $\frac{1}{4}$
(C) $\frac{1}{3}$ (D) $\frac{3}{4}$
-

280. Navjivan Express from Ahmedabad to Chennai leaves Ahmedabad at 6:30 am and travels at 50km per hour towards Baroda situated 100 kms away. At 7:00 am Howrah - Ahmedabad express leaves Baroda towards Ahmedabad and travels at 40 km per hour. At 7:30 Mr. Shah, the traffic controller at Baroda realises that both the trains are running on the same track. How much time does he have to avert a head-on collision between the two trains?

CAT 1999, Q72

- (A) 15 minutes (B) 20 minutes
(C) 25 minutes (D) 30 minutes
-

CAT 1998 - Questions 281-286

281. A company has a job to prepare certain number cans and there are three machines A, B and C for this job. A can complete the job in 3 days, B can complete the job in 4 days, and C can complete the job in 6 days. How many days will the company take to complete the job if all the machines are used simultaneously?

CAT 1998, Q51

- (A) 4 days
(B) $\frac{4}{3}$ days
(C) 3 days
(D) 12 days

282. Distance between A and B is 72 km. Two men started walking from A and B at the same time towards each other. The person who started from A travelled uniformly with average speed of 4 km/hr. While the other man travelled with varying speed as follows: in the first hour his speed was 2 km/hr, in the second hour it was 2.5 km/hr, in the third hour it was 3 km/hr, and so on. When will they meet each other?

CAT 1998, Q63

- (A) 7 hr
(B) 10 hr
(C) 35 km from A
(D) Mid-way between A and B

283. I have one-rupee coins, 50-paisa coins and 25-paisa coins. The number of coins are in the ratio 2.5 : 3 : 4. If the total amount with me is Rs. 210, find the number of one-rupee coins.

CAT 1998, Q83

- (A) 90
(B) 85
(C) 100
(D) 105

Questions 284 to 285

Answer the following questions based on the following information.

A company purchases components A and B from Germany and USA respectively. A and B form 30% and 50% of the total production cost. Current gain is 20%. Due to change in the international scenario, cost of the German mark increased by 30% and that of USA dollar increased by 22%. Due to market conditions, the selling price cannot be increased by more than 10%.

284. What is the maximum current gain possible?

CAT 1998, Q85

- (A) 10%
(B) 12.5%
(C) 0%
(D) 7.5%

285. If the USA dollar becomes cheap by 12% over its original cost and the cost of German mark increased by 20%, what will be the gain? (The selling price is not altered.)

CAT 1998, Q86

- (A) 10%
(B) 20%
(C) 15%
(D) 7.5%

286. There are two containers: the first contains 500 ml of alcohol, while the second contains 500 ml of water. Three cups of alcohol from the first container is taken out and is mixed well in the second container. Then three cups of this mixture is taken out and is mixed in the first container. Let A denote the proportion of water in the first container and B denote the proportion of alcohol in the second container. Then,

CAT 1998, Q93

(A) $A > B$

(B) $A < B$

(C) $A = B$

(D) Cannot be determined

CAT 1997 - Questions 287-300

287. A student gets an aggregate of 60% marks in five subjects in the ratio 10 : 9 : 8 : 7 : 6. If the passing marks are 50% of the maximum marks and each subject has the same maximum marks, in how many subjects did he pass the examination?

CAT 1997, Q107

- (A) 2 (B) 3
(C) 4 (D) 5

288. After allowing a discount of 11.11%, a trader still makes a gain of 14.28%. At how many percentage above the cost price does he mark on his goods?

CAT 1997, Q110

- (A) 28.56% (B) 35%
(C) 22.22% (D) None of these

289. A dealer buys dry fruits at Rs. 100, Rs. 80 and Rs. 60 per kilogram. He mixes them in the ratio 3 : 4 : 5 by weight, and sells at a profit of 50%. At what price per kilogram does he sell the dry fruits?

CAT 1997, Q112

- (A) Rs. 80 (B) Rs. 100
(C) Rs. 95 (D) None of these

290. Fresh grapes contain 90% water while dry grapes contain 20% water. What is the weight of dry grapes obtained from 20 kg fresh grapes?

CAT 1997, Q113

- (A) 2 kg (B) 2.5 kg
(C) 2.4 kg (D) 10 kg

291. An express train travelling at 80 km/hr overtakes a goods train, twice as long and going at 40 km/hr on a parallel track, in 54 s. How long will the express train take to cross a platform of 400 m long?

CAT 1997, Q114

- (A) 36 s (B) 45 s
(C) 27 s (D) None of these

292. The average marks of a student in 10 papers are 80. If the highest and the lowest scores are not considered, the average is 81. If his highest score is 92, find the lowest.

CAT 1997, Q117

- (A) 55 (B) 60
(C) 62 (D) Cannot be determined

293. The value of each of a set of coins varies as the square of its diameter, if its thickness remains constant, and it varies as the thickness, if the diameter remains constant. If the diameter of two coins are in the ratio 4 : 3, what should be the ratio of their thickness' be if the value of the first is four times that of the second?

- (A) 16 : 9
(C) 9 : 16
- (B) 9 : 4
(D) 4 : 9

Questions 294 to 295

The Weirido Holiday Resort follows a particular system of holidays for its employees. People are given holidays on the days where the first letter of the day of the week is the same as the first letter of their names. All employees work at the same rate.

294. Raja starts working on February 25(Sunday), 1996, and finishes the job on March 2, 1996. How much time would T and J take to finish the same job if both start on the same day as Raja?

CAT 1997, Q137

- (A) 4 days
(C) Either a or b
- (B) 5 days
(D) Cannot be determined

295. Starting on February 25, 1996 (Sunday), if Raja had finished his job on April 2, 1996, when would T and S together likely to have completed the job, had they started on the same day as Raja?

CAT 1997, Q138

- (A) March 15, 1996
(C) March 22, 1996
- (B) March 14, 1996
(D) Data insufficient

Questions 296 to 298

Boston is 4 hr ahead of Frankfurt and 2 hr behind India. X leaves Frankfurt at 6 p.m. on Friday and reaches Boston the next day. After waiting there for 2 hr, he leaves exactly at noon and reaches India at 1 a.m. On his return journey, he takes the same route as before, but halts at Boston for 1hr less than his previous halt there. He then proceeds to Frankfurt.

296. If his journey, including stoppage, is covered at an average speed of 180 mph during the journey from Frankfurt to India, what is the distance between Frankfurt and India?

CAT 1997, Q139

- (A) 3,600 miles
(C) 5,580 miles
- (B) 4,500 miles
(D) Data insufficient

297. If X had started the return journey from India at 2.55 a.m. on the same day that he reached there, after how much time would he reach Frankfurt?

CAT 1997, Q140

- (A) 24 hr
(C) 26 hr
- (B) 25 hr
(D) Data insufficient

298. What is X's average speed for the entire journey (to and fro)?

CAT 1997, Q141

- (A) 176 mph
(C) 165 mph
- (B) 180 mph
(D) Data insufficient

Questions 299 to 300

A thief, after committing the burglary, started fleeing at 12 noon, at a speed of 60 km/hr. He was then chased by a policeman X. X started the chase, 15 min after the thief had started, at a speed of 65 km/hr.

299. At what time did X catch the thief?

CAT 1997, Q144

- (A) 3.30 p.m. (B) 3 p.m.
(C) 3.15 p.m. (D) None of these
-

300. If another policeman had started the same chase along with X, but at a speed of 60 km/hr, then how far behind was he when X caught the thief?

CAT 1997, Q145

- (A) 18.75 km (B) 15 km
(C) 21 km (D) 37.5 km
-

CAT 1996 - Questions 301-313

301. Instead of a metre scale, a cloth merchant uses a faulty 120 cm scale while buying, but uses a faulty 80 cm scale while selling the same cloth. If he offers a discount of 20%, what is his overall profit percentage?

CAT 1996, Q112

- (A) 20% (B) 25%
(C) 40% (D) 15%

302. The cost of diamond varies directly as the square of its weight. Once, this diamond broke into four pieces with weights in the ratio 1 : 2 : 3 : 4. When the pieces were sold, the merchant got Rs. 70,000 less. Find the original price of the diamond.

CAT 1996, Q117

- (A) Rs. 1.4 lakh (B) Rs. 2 lakh
(C) Rs. 1 lakh (D) Rs. 2.1 lakh

Questions 303 to 304

Answer the questions based on the following information. A watch dealer incurs an expense of Rs. 150 for producing every watch. He also incurs an additional expenditure of Rs. 30,000, which is independent of the number of watches produced. If he is able to sell a watch during the season, he sells it for Rs. 250. If he fails to do so, he has to sell each watch for Rs. 100.

303. If he is able to sell only 1,200 out of 1,500 watches he has made in the season (and the rest 300 are sold out of season), then he has made a profit of

CAT 1996, Q120

- (A) Rs. 90,000 (B) Rs. 75,000
(C) Rs. 45,000 (D) Rs. 60,000

304. If he produces 1,500 watches, what is the number of watches that he must sell during the season in order to break-even, given that he is able to sell all the watches produced?

CAT 1996, Q121

- (A) 500 (B) 700
(C) 800 (D) 1,000

Questions 305 to 306

Answer the questions based on the following information. A salesman enters the quantity sold and the price into the computer. Both the numbers are two-digit numbers. But, by mistake, both the numbers were entered with their digits interchanged. Although, the total sales value remained the same, i.e. Rs. 1,148, the total inventory sold got reduced by 54.

305. What is the actual price per piece?

CAT 1996, Q124

- (A) Rs. 82 (B) Rs. 41
(C) Rs. 14 (D) Rs. 28
-

306. What is the actual quantity sold?

CAT 1996, Q125

- (A) 28 (B) 21
(C) 82 (D) 14
-

307. In a mile race, Akshay can be given a start of 128 m by Bhairav. If Bhairav can give Chinmay a start of 4 m in a 100 m dash, then who out of Akshay and Chinmay will win a race of one and half miles, and what will be the final lead given by the winner to the loser? (One mile is 1,600 m.)

CAT 1996, Q131

- (A) Akshay, $\frac{1}{12}$ mile (B) Chinmay, $\frac{1}{32}$ mile
(C) Akshay, $\frac{1}{24}$ mile (D) Chinmay, $\frac{1}{16}$ mile
-

308. Two liquids A and B are in the ratio 5 : 1 in container 1 and 1 : 3 in container 2. In what ratio should the contents of the two containers be mixed so as to obtain a mixture of A and B in the ratio 1 : 1?

CAT 1996, Q132

- (A) 2 : 3 (B) 4 : 3
(C) 3 : 2 (D) 3 : 4
-

309. A man travels three-fifths of a distance AB at a speed $3a$, and the remaining at a speed $2b$. If he goes from B to A and return at a speed $5c$ in the same time, then

CAT 1996, Q133

- (A) $\frac{1}{a} + \frac{1}{b} = \frac{1}{c}$ (B) $a + b = c$
(C) $\frac{1}{a} + \frac{1}{b} = \frac{2}{c}$ (D) None of these
-

310. A man travels from A to B at a speed x km/hr. He then rests at B for x hours. He then travels from B to C at a speed $2x$ km/hr and rests for $2x$ hours. He moves further to D at a speed twice as that between B and C. He thus reaches D in 16 hr. If distances A-B, B-C and C-D are all equal to 12 km, the time for which he rested at B could be

CAT 1996, Q134

- (A) 3 hr (B) 6 hr
(C) 2 hr (D) 4 hr
-

311. The price of a Maruti car rises by 30% while the sales of the car come down by 20%. What is the percentage change in the total revenue?

CAT 1996, Q136

- | | |
|---------|---------|
| (A) -4% | (B) -2% |
| (C) +4% | (D) +2% |
-

312. In a watch, the minute hand crosses the hour hand for the third time exactly after every 3 hr 18 min and 15s of normal time. What is the time gained or lost by this watch in one day?

CAT 1996, Q139

- | | |
|------------------------|------------------------|
| (A) 14 min 10 s lost | (B) 13 min 48 s lost |
| (C) 13 min 20 s gained | (D) 14 min 40 s gained |
-

313. I sold two watches for Rs. 300 each, one at the loss of 10% and the other at the profit of 10%. What is the percentage of loss(-) or profit(+) that resulted from the transaction?

CAT 1996, Q140

- | | |
|-----------|-----------|
| (A) (+)10 | (B) (-)1 |
| (C) (+)1 | (D) (-)10 |
-

CAT 1995 - Questions 314-324

314. Ram purchased a flat at Rs. 1 lakh and Prem purchased a plot of land worth Rs. 1.1 lakh. The respective annual rates at which the prices of the flat and the plot increased were 10% and 5%. After two years they exchanged their belongings and one paid the other the difference. Then

CAT 1995, Q53

- (A) Ram paid Rs. 275 to Prem
(B) Ram paid Rs. 475 to Prem
(C) Ram paid Rs. 375 to Prem
(D) Prem paid Rs. 475 to Ram

315. A person who has a certain amount with him goes to market. He can buy 50 oranges or 40 mangoes. He retains 10% of the amount for taxi fares and buys 20 mangoes, and of the balance he purchases oranges. Number of oranges he can purchase is

CAT 1995, Q59

- (A) 36
(B) 40
(C) 15
(D) 20

316. A man invests Rs. 3,000 at the rate of 5% per annum. How much more should he invest at the rate of 8%, so that he can earn a total of 6% per annum?

CAT 1995, Q66

- (A) Rs. 1,200
(B) Rs. 1,300
(C) Rs. 1,500
(D) Rs. 2,000

317. $\frac{2}{5}$ of the voters promise to vote for P and the rest promised to vote for Q. Of these, on the last day 15% of the voters went back on their promise to vote for P and 25% of voters went back on their promise to vote for Q, and P lost by 2 votes. Then the total number of voters is

CAT 1995, Q67

- (A) 100
(B) 110
(C) 90
(D) 95

318. In a race of 200 m, A beats S by 20 m and N by 40 m. If S and N run a race of 100 m with exactly the same speed as before, then by how many metres will S beat N?

CAT 1995, Q69

- (A) 11.11 m
(B) 10 m
(C) 12 m
(D) 25 m

319. A group of men decided to do a job in 8 days. But since 10 men dropped out every day, the job got completed at the end of the 12th day. How many men were there at the beginning?

CAT 1995, Q71

- (A) 165
(B) 175
(C) 80
(D) 90

320. Two typists undertake to do a job. The second typist begins working one hour after the first. Three hours after the first typist has begun working, there is still $\frac{9}{20}$ of the work to be done. When the

assignment is completed, it turns out that each typist has done half the work. How many hours would it take each one to do the whole job individually?

CAT 1995, Q73

- (A) 12 hr and 8 hr
(B) 8 hr and 5.6 hr
(C) 10 hr and 8 hr
(D) 5 hr and 4 hr
-

321. I live X floors above the ground floor of a high-rise building. It takes me 30 s per floor to walk down the steps and 2 s per floor to ride the lift. What is X , if the time taken to walk down the steps to the ground floor is the same as to wait for the lift for 7 min and then ride down?

CAT 1995, Q74

- (A) 4
(B) 7
(C) 14
(D) 15
-

322. A stockist wants to make some profit by selling sugar. He contemplates various methods. Which of the following would maximise his profit? I. Sell sugar at 10% profit. II. Use 900 g of weight instead of 1 kg. III. Mix 10% impurities in sugar and sell sugar at cost price. IV. Increase the price by 5% and reduce weights by 5%.

CAT 1995, Q80

- (A) I or III
(B) II
(C) II, III and IV
(D) Profits are same
-

323. A man can walk up a moving 'up' escalator in 30 s. The same man can walk down this moving 'up' escalator in 90 s. Assume that his walking speed is the same upwards and downwards. How much time will he take to walk up the escalator, when it is not moving?

CAT 1995, Q81

- (A) 30 s
(B) 45 s
(C) 60 s
(D) 90 s
-

324. The rate of inflation was 1000%. Then what will be the cost of an article, which costs 6 units of currency now, 2 years from now?

CAT 1995, Q85

- (A) 666
(B) 660
(C) 720
(D) 726
-

325. Choose the best alternative.

The number of votes not cast for the Praja Party increased by 25% in the National General Election over those not cast for it in the previous Assembly Polls, and the Praja Party lost by a majority twice as large as that by which it had won the Assembly Polls. If a total 2,60,000 people voted each time. How many voted for the Praja Party in the Assembly Elections.

CAT 1994, Q51

- (A) 1,10,000 (B) 1,50,000
(C) 1,40,000 (D) 1,20,000

326. Two towns A and B are 100 km apart. A school is to be built for 100 students of town B and 30 students of Town A. Expenditure on transport is Rs. 1.20 per km per student. If the total expenditure on transport by all 130 students is to be as small as possible, then the school should be built at

CAT 1994, Q57

- (A) 33 km from Town A. (B) 33 km from Town B
(C) Town A (D) Town B

327. One man can do as much work in one day as a woman can do in 2 days. A child does one third the work in a day as a woman. If an estate-owner hires 39 pairs of hands, men, women and children in the ratio 6 : 5 : 2 and pays them in all Rs. 1113 at the end of the days work. What must the daily wages of a child be, if the wages are proportional to the amount of work done?

CAT 1994, Q58

- (A) Rs.14 (B) Rs.5
(C) Rs.20 (D) Rs.7

328. If the harmonic mean between two positive numbers is to their geometric mean as 12 : 13; then the numbers could be in the ratio

CAT 1994, Q61

- (A) 12 : 13 (B) $1/12 : 1/13$
(C) 4 : 9 (D) 2 : 3

329. A water tank has three taps A, B, and C. A fills four buckets in 24 mins, B fills 8 buckets in 1 hour and C fills 2 buckets in 20 minutes. If all the taps are opened together a full tank is emptied in 2 hours. If a bucket can hold 5 litres of water, what is the capacity of the tank?

CAT 1994, Q65

- (A) 120 litres (B) 240 litres
(C) 180 litres (D) 60 litres

330. Shyam went from Delhi to Shimla via Chandigarh by car. The distance from Delhi to Chandigarh is $\frac{3}{4}$ times the distance from Chandigarh to Shimla. The average speed from Delhi to Chandigarh was half as much again as that from Chandigarh to Shimla. If the average speed for the entire journey was 49 kmph. What was the average speed from Chandigarh to Shimla?

- (A) 39.2 kmph (B) 63 kmph
(C) 42 kmph (D) None of these

331. It takes the pendulum of a clock 7 seconds to strike 4 o'clock. How much time will it take to strike 11 o'clock?

CAT 1994, Q68

- (A) 18 seconds (B) 20 seconds
(C) 19.25 seconds (D) 23.33 seconds

332. Along a road lie an odd number of stones placed at intervals of 10m. These stones have to be assembled around the middle stone. A person can carry only one stone at a time. A man carried out the job starting with the stone in the middle, carrying stones in succession, thereby covering a distance of 4.8 km. Then the number of stones is

CAT 1994, Q69

- (A) 35 (B) 15
(C) 29 (D) 31

333. A man buys spirit at Rs. 60 per litre, adds water to it and then sells it at Rs. 75 per litre. What is the ratio of spirit to water if his profit in the deal is 37.5%?

CAT 1994, Q71

- (A) 9 : 1 (B) 10 : 1
(C) 11 : 1 (D) None of these

334. A and B walk from X to Y, a distance of 27 km at 5 kmph and 7 kmph respectively. B reaches Y and immediately turns back meeting A at Z. What is the distance from X to Z?

CAT 1994, Q73

- (A) 25 km (B) 22.5 km
(C) 24 km (D) 20 km

Questions 335 to 337

Are based on the following information: Alphonso, on his death bed, keeps half his property for his wife and divide the rest equally among his three sons Ben, Carl and Dave. Some years later Ben dies leaving half his property to his widow and half to his brothers Carl and Dave together, shared equally. When Carl makes his will he keeps half his property for his widow and the rest he bequeaths to his younger brother Dave. When Dave dies some years later, he keeps half his property for his widow and the remaining for his mother. The mother now has Rs. 1,575,000. (Note: this information is shared by Questions 335 to 337.)

335. What was the worth of the total property?

CAT 1994, Q74

- (A) Rs. 30 lakh (B) Rs. 8 lakh
(C) Rs. 18 lakh (D) Rs.24 lakh

336. What was Carl's original share?

CAT 1994, Q75

- (A) Rs. 4 lakh (B) Rs. 12 lakh
(C) Rs. 6 lakh (D) Rs. 5 lakh
-

337. What was the ratio of the property owned by the widows of the three sons, in the end?

CAT 1994, Q76

- (A) 7 : 9 : 13 (B) 8 : 10 : 15
(C) 5 : 7 : 9 (D) 9 : 12 : 13
-

338. There is a leak in the bottom of the tank. This leak can empty a full tank in 8 hours. When the tank is full, a tap is opened into the tank which admits 6 litres per hour and the tank is now emptied in 12 hours. What is the capacity of the tank?

CAT 1994, Q78

- (A) 28.8 litres (B) 36 litres
(C) 144 litres (D) Cannot be determined
-

339. A dealer offers a cash discount of 20% and still makes a profit of 20%, when he further allows 16 articles to a dozen to a particularly sticky bargainer. How much percent above the cost price were his wares listed?

CAT 1994, Q80

- (A) 100% (B) 80%
(C) 75% (D) 66 $\frac{2}{3}$ %
-

340. The winning relay team in a high school sports competition clocked 48 minutes for a distance of 13.2 km. Its runners A, B, C and D maintained speeds of 15 kmph, 16 kmph, 17 kmph, and 18 kmph respectively. What is the ratio of the time taken by B to than taken by D?

CAT 1994, Q86

- (A) 5 : 16 (B) 5 : 17
(C) 9 : 8 (D) 8 : 9
-

CAT 1993 - Questions 341-349

341. The rate of increase of the price of sugar is observed to be two percent more than the inflation rate expressed in percentage. The price of sugar, on January 1, 1994, is Rs. 20 per kg. The inflation rate for the years 1994 and 1995 are expected to be 8% each. The expected price of sugar on January 1, 1996 would be

CAT 1993, Q59

- (A) 23.60 (B) 24.00
(C) 24.20 (D) 24.60

342. From each of the two given numbers, half the smaller number is subtracted. Of the resulting numbers the larger one is three times as large as the smaller. What is the ratio of the two numbers?

CAT 1993, Q65

- (A) 2 : 1 (B) 3 : 1
(C) 3 : 2 (D) None

343. A group of workers was put on a job. From the second day onwards, one worker was withdrawn each day. The job was finished when the last worker was withdrawn. Had no worker been withdrawn at any stage, the group would have finished the job in two-thirds the time. How many workers were there in the group?

CAT 1993, Q83

- (A) 2 (B) 3
(C) 5 (D) 11

344. A report consists of 20 sheets each of 55 lines and each such line consist of 65 characters. This report is retyped into sheets each of 65 lines such that each line consists of 70 characters. The percentage reduction in number of sheets is closest to

CAT 1993, Q89

- (A) 20 (B) 5
(C) 30 (D) 35

345. A young girl counted in the following way on the fingers of her left hand. She started calling the thumb 1, the index finger 2, middle finger 3, ring finger 4, little finger 5, then reversed direction, calling the ring finger 6, middle finger 7, index finger 8, thumb 9, then back to the index finger for 10, middle finger for 11, and so on. She counted up to 1994. She ended on her.

CAT 1993, Q91

- (A) thumb (B) index finger
(C) middle finger (D) ring finger

Questions 346 to 348

Use the following information: Q started to move from point B towards point A exactly an hour after P started from A in the opposite direction. Q's speed was twice that of P. When P had covered one-sixth of the distance between the points A and B, Q had also covered the same distance.

346. The point where P and Q would meet is

CAT 1993, Q92

- | | |
|-----------------|----------------------------------|
| (A) Closer to A | (B) Exactly between A and B |
| (C) Closer to B | (D) P and Q will not meet at all |
-

347. How many hours would P take to reach B?

CAT 1993, Q93

- | | |
|-------|--------|
| (A) 2 | (B) 5 |
| (C) 6 | (D) 12 |
-

348. How many more hours would P (compared to Q) take to complete his journey?

CAT 1993, Q94

- | | |
|-------|-------|
| (A) 4 | (B) 5 |
| (C) 6 | (D) 7 |
-

349. A ship leaves on a long voyage. When it is 18 miles from the shore, a seaplane, whose speed is ten times that of the ship, is sent to deliver mail. How far from the shore does the seaplane catch up with the ship?

CAT 1993, Q97

- | | |
|--------------|--------------|
| (A) 24 miles | (B) 25 miles |
| (C) 22 miles | (D) 20 miles |
-

CAT 1991 - Questions 350-355

350. Alord got an order from a garment manufacturer for 480 Denim Shirts. He brought 12 sewing machines and appointed some expert tailors to do the job. However, many didn't report to duty. As a result, each of those who did, had to stitch 32 more shirts than originally planned by Alord, with equal distribution of work. How many tailors had been appointed earlier and how many had not reported for work?

CAT 1991, Q64

- (A) 12,4 (B) 10,3
(C) 10,4 (D) None of these

351. Three machines, A, B and C can be used to produce a product. Machine A will take 60 hours to produce a million units. Machine B is twice as fast as Machine A. Machine C will take the same amount of time to produce a million units as A and B running together. How much time will be required to produce a million units if all the three machines are used simultaneously?

CAT 1991, Q78

- (A) 12 hours (B) 10 hours
(C) 8 hours (D) 6 hour

352. Gopal went to a fruit market with certain amount of money. With this money he can buy either 50 oranges or 40 mangoes. He retains 10% of the money for taxi fare. If he buys 20 mangoes, then the maximum number of oranges he can buy is

CAT 1991, Q89

- (A) 25 (B) 20
(C) 18 (D) 6

353. Every day Neera's husband meets her at the city railway station at 6.00 p.m. and drives her to their residence. One day she left early from the office and reached the railway station at 5.00 p.m. She started walking towards her home, met her husband coming from their residence on the way and they reached home 10 minutes earlier than the usual time. For how long did she walk?

CAT 1991, Q90

- (A) 1 hour (B) 50 minutes
(C) 1/2 hour (D) 55 minutes

354. A sum of money compounded annually becomes Rs.625 in two years and Rs.675 in three years. The rate of interest per annum is

CAT 1991, Q92

- (A) 7% (B) 8%
(C) 6% (D) 5%

355. An outgoing batch of students wants to gift PA system worth Rs.4200 to their school. If the teachers offer to pay 50% more than the students, and an external benefactor gives three times teachers

contribution. How much should the teachers donate?

CAT 1991, Q96

(A) 600

(B) 840

(C) 900

(D) 1200

CAT 1990 - Questions 356-363

356. In a stockpile of products produced by three machines M1, M2 and M3, 40% and 30% were manufactured by M1 and M2 respectively. 3% of the products of M1 are defective, 1% of products of M2 defective, while 95% of the products of M3 are not defective. What is the percentage of defective in the stockpile?

CAT 1990, Q19

- (A) 3% (B) 5%
(C) 2.5% (D) 4%

357. Gopal went to a fruit market with certain amount of money. With this money he can buy either 50 oranges or 40 mangoes. He retains 10% of the money for taxi fare. If he buys 20 mangoes, then the number of oranges he can buy is

CAT 1990, Q25

- (A) 25 (B) 18
(C) 20 (D) None of these

Questions 358 to 360

Ghosh Babu has a certain amount of property consisting of cash, gold coins and silver bars. The cost of a gold coin is Rs. 4000 and the cost of a silver bar is Rs. 1000. Ghosh Babu distributed his property among his daughters equally. He gave to his eldest daughter gold coins worth 20% of the total property and Rs. 25000 in cash. The second daughter was given silver bars worth 20% of the remaining property and Rs. 50000 cash. Among the third and fourth daughters, he distributed the remaining gold and silver bars equally both together accounting each for 20% of the property remaining after the previous distribution. He also gave the third and fourth daughters Rs. 25000 more than what the second daughter had received in cash.

358. The amount of property in gold and silver possessed by Ghosh Babu is

CAT 1990, Q29

- (A) 2,25,000 (B) 2,75,000
(C) Rs. 4,25,000 (D) None of these

359. Total property of Ghosh Babu (in Rs.lakh) is

CAT 1990, Q30

- (A) 5.0 (B) 7.5
(C) 10.0 (D) 12.5.

360. If the ratio of the gold to silver bars that Ghosh Babu had is 7:27, the number of silver bars he has is

CAT 1990, Q31

- (A) 90 (B) 60
(C) 75 (D) 135

361. A car after traveling 18 km from a point A developed some problem in the engine and speed became $\frac{4}{5}$ of its original speed. As a result, the car reached point B 45 minutes late. If the engine had developed the same problem after traveling 30 km from A, then it would have reached B only 36 minutes late. The original speed of the car (in km per hour) and the distance between the points A and B (in km.) is

CAT 1990, Q36

- (A) 25, 130
(B) 30, 150
(C) 20, 90
(D) None of these
-

362. A, B and C individually can finish a work in 6, 8 and 15 hours respectively. They started the work together and after completing the work got Rs.94.60 in all. When they divide the money among themselves, A, B and C will respectively get (in Rs.)

CAT 1990, Q37

- (A) 44, 33, 17.60
(B) 43, 27, 20, 24.40
(C) 45, 30, 19.60
(D) 42, 28, 24.60
-

363. Two trains are traveling in opposite direction at uniform speed 60 and 50 km per hour respectively. They take 5 seconds to cross each other. If the two trains had traveled in the same direction, then a passenger sitting in the faster moving train would have overtaken the other train in 18 seconds. What are the lengths of trains (in metres)?

CAT 1990, Q38

- (A) 112.78
(B) 97.78, 55
(C) 102.78, 50
(D) 102.78, 55
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- End of PYQ Collection -
