AVERAGE

1. If a, b, c, d, e are five consecutive odd integers, then what is their average?

   (1) a + 4 (2) $\frac{abcd}{5}$

   (3) 5 (a + b + c + d + e) (4) a + 8

   (5) None of these

2. The average age of 24 students and the class teacher is 16 years. If the class teacher's age is excluded, the average reduces by 1 year. What is the age of the class teacher?

   (1) 50 years (2) 45 years

   (3) 40 years (4) Data inadequate

   (5) None of these

3. The average of 8 numbers is 14. If 2 is subtracted from each given number, then what will be the new average?

   (1) 12 (2) 10

   (3) 16 (4) 15

   (5) None of these

4. The average age of x numbers is 3x. If x - 1 is subtracted from each given number, then what will be the new average?

   (1) 2x + 1 (2) 3(x - (1)

   (3) 2x - 1 (4) Data inadequate

   (5) None of these

5. The average age of 34 boys in a class is 14 years. If the teacher's age is included, the average age of boys and the teacher becomes 15 years. What is the teacher's age?

   (1) 48 years (2) 46 years

   (3) 49 years (4) 45 years

   (5) None of these

6. The average of 40 numbers is 405. If each of the number is divided by 15, then find the average of new set of numbers.

   (1) 27 (2) 28

   (3) 21 (4) 26

   (5) None of these

7. The average of 8 numbers is 21. If each of the number is multiplied by 8, then find the average of new set of numbers.

   (1) 168 (2) 167

   (3) 158 (4) 161

   (5) None of these

8. The average weight of 8 persons increases by 1.5kg, if a person weighing 65kg is replaced by a new person. What could be the weight of the new person?

   (1) 76 kg (2) 77 kg

   (3) 76.5 kg (4) Data inadequate

   (5) None of these

9. In a class, there are 24 boys whose average age is decreased by 3 months, when 1 boy aged 20 years is replaced by a new boy. Find the age of the new boy.

   (1) 14 years (2) 16 years

   (3) 17 years (4) 18 years

   (5) None of these

10. The average of marks obtained by 77 candidates in a certain examination is 17. If the average marks of passed candidates are 19 and that of the failed candidates are 8, then what is the number of candidates who passed the examination?

    (1) 36 (2) 63

    (3) 40 (4) 70

    (5) None of these

11. A batsman in his 16th innings makes a score of 92 and thereby increases his average by 4. What is his average after 19 innings?

    (1) 32 (2) 30

    (3) 34 (4) 23

    (5) None of these

12. A constant distance from A to B is covered by a man at 40km/hr. The person rides back the same distance at 60 km/hr. Find his average speed during the whole journey.

(1) 48km/hr (2) 50km/hr

(3) 44km/hr (4) 52km/hr

(5) None of these

13. The average salary of the entire staff in an office is Rs 130 per month. The average salary of officers is Rs 540 and that of non-officers is Rs 114. If the number of officers is 16, then find the number of non-officers in the office.

(1) 140 (2) 410

(3) 510 (4) 150

(5) None of these

14. A car runs for t_1 hours at v_1 km/hr and t_2 hours at v_2 km/hr. What is the average speed of the car for the entire journey?

(1) $\frac{t_1 + t_2}{v_1t_1 + v_2t_2}$ km/hr

(2) $\frac{v_1t_1 + v_2t_2}{t_1 + t_2}$ km/hr

(3) $\frac{v_1t_1 + v_2t_1}{t_1 + t_2}$ km/hr

(4) $\frac{v_1 + v_2}{v_1t_1 + v_2t_2}$ km/hr

(5) None of these

15. A car runs 'x' km at an average speed of v_1 km/hr and 'y' km at an average speed of v_2 km/hr. What is the average speed of the car for the entire journey?

(1) $\frac{v_1v_2(x + y)}{xv_2 + yv_1}$ km/hr

(2) $\frac{xv_2 + yv_1}{v_1v_2 (x + y)}$ km/hr

(3) $\frac{xy (v_1 + v_2)}{xv_1 \times yv_2}$ km/hr

(4) $\frac{(xv_1 + yv_2)}{xy (v_1 + v_2)}$ km/hr

(5) None of these

16. An aeroplane covers the four sides of square field at speeds of 200, 400, 600 and 800 km/hr. The average speed of the plane in the entire journey is

(1) 600km/hr (2) 400km/hr

(3) 500km/hr (4) 384km/hr

(5) None of these

17. The mean of the marks obtained by 100 students is 60. If the marks obtained by one of the students was incorrectly calculated as 75, whereas the actual mark obtained by him was 65, then what is the correct mean of the marks obtained by the students?

(1) 59 (2) 58.50

(3) 50 (4) 55

(5) None of these

18. In one-day cricket match the captain of one the teams scored 30 runs more than the average runs scored by the remaining six batsmen of that team who batted in the match. If the total runs scored by all the batsmen of that team were 310, then how many runs did the captain score?

(1) 60

(2) 70

(3) 50

(4) Cannot be determined

(5) None of these

19. The average of four numbers A, B, C and D is 40. The average of four numbers A, B, E and F is also 40. (A, B are common). Which of the following must be true?

(1) $(A + B \neq C + D)$ (2) $(C + D = E + F)$

(3) Either C = E or F; and D = F = or E

(4) The data set has even numbers of observations

(5) None of these

20. The average of four positive integers is 72.5, the highest integer is 117 and the lowest integer is 15. The difference between the remaining two integers is 12. Which is the higher of these two remaining integers?

(1) 73

(2) 84

(3) 70

(4) Cannot be determined

(5) None of these

21. A, B, C and D are four consecutive even numbers respectively and their average is 65. What is the product of A and D?

(1) 3968 (2) 4216

(3) 4092 (4) 4352

(5) None of these

22. The sum of five numbers is 555. The average of the first two numbers is 75 and the third number is 115. What is the average of the last two numbers?

(1) 145 (2) 290

(3) 265 (4) 150

(5) None of these

23. The average age of A, B and C is 26 years. If the average age of A and C is 29 years, then what is the age of B in years?

(1) 26 years (2) 20 years

(3) 24 years (4) 23 years

(5) None of these

24. The sum of three consecutive even numbers is 44 more than the average of these numbers. Which of the following is the third (largest) of these numbers?

(1) 16

(2) 18

(3) 24

(4) Cannot be determined

(5) None of these

25. Average weight of 10 boys is more than the average weight of 15 girls by 5kg. If the total weight of the 10 boys is 550, what is the average weight of the 10 boys and 15 girls together?

(1) 52 kg (2) 52.5 kg

(3) 53 kg (4) 53.5 kg

(5) None of these

26. The average age of a class of 65 boys was 14 years, the average age of 20 of them was 14 years, and that of another 15 was 12 years. Find the average age of the remaining boys.

(1) 16 years (2) 13 years

(3) 17 years (4) 15 years

(5) None of these

27. A, B, C and D are four consecutive odd numbers and their average is 42. What is the product of B and D?

(1) 1136 (2) 1340

(3) 1845 (4) 1965

(5) None of these

28. The sum of five numbers is 260. The average of the first two numbers is 30 and average of the last two numbers is 70. What is the third number?

(1) 33

(2) 60

(3) 75

(4) Cannot be determined

(5) None of these

29. The average of 5 consecutive odd numbers A, B, C, D and E is 47. What is the product of A and D?

(1) 2107 (2) 1935

(3) 2021 (4) 2193

(5) None of these

30. The average weight of three men A, B and C is 84 kg. D joins them and the average weight of the four becomes 80 kg. If E, whose weight is 3kg more than that of D, replaces A, the average weight of B, C, D and E becomes 79 kg. The weight of A is

(1) 65 kg (2) 70 kg

(3) 75 kg (4) 80 kg

(5) None of these

31. Ajay scored 20, 30, 60, 25 and 40 marks in five subjects. What is his average mark in five subjects?

(1) 35 (2) 30

(3) 32.5 (4) 38

(5) None of these

32. The average of 5 quantities is 6. The average of 3 of them is 8. What is the average of the remaining two numbers?

(1) 4 (2) 3

(3) 3.5 (4) 4.2

(5) None of these

33. The average temperature on Wednesday, Thursday and Friday was 250°c. The average temperature on Thursday, Friday and Saturday was

240°c. If the temperature on Saturday was 270°c, what was the temperature on Wednesday?

(1) 310 (2) 325

(3) 275 (4) 300

(5) None of these

34. The average rainfall for the 3 days out of five days was recorded to be 0.45 inches. The rainfall on the last two days was in the ratio 2 : 3. The average of five days was 0.40 inches. What was the rainfall on the last day?

(1) 0.385 (2) 0.39

(3) 0.375 (4) 0.42

(5) None of these

35. When a student weighing 45 kgs left a class, the average weight of the remaining 59 students increased by 200g. What is the average weight of the remaining 59 students?

(1) 40 kg (2) 32 kg

(3) 33.5 kg (4) 35 kg

(5) None of these

36. The average weight of a class of 24 students is 36 kg. When the weight of the teacher is also included, the average weight increases by 1kg. What is the weight of the teacher?

(1) 61 kg (2) 55 kg

(3) 64 kg (4) 60 kg

(5) None of these

37. The average of 5 quantities is 10 and the average of 3 of them is 9. What is the average of the remaining 2?

(1) 11 (2) 15

(3) 10.5 (4) 11.5

(5) None of these

38. The average age of a family of 5 members is 20 years. If the age of the youngest member be 10 years then what was the average age of the family at the time of the birth of the youngest member?

(1) 12.5 (2) 15

(3) 22 (4) 11

(5) None of these

39. A student finds the average of 10 positive integers. Each integer contains two digits. By mistake, the boy interchanges the digits of one number say 'ba' for 'ab'. Due to this, the average becomes 1.8 less than the previous one. What was the difference of the two digits a and b?

(1) 1 (2) 2.4

(3) 2.2 (4) 2

(5) None of these

40. Average cost of 5 apples and 4 mangoes is Rs. 36. The average cost of 7 apples and 8 mangoes is Rs. 48. Find the total cost of 24 apples and 24 mangoes

(1) 3444 (2) 2088

(3) 2064 (4) 3032

(5) None of these

41. If the mean of numbers 28, x, 42, 78 and 104 is 62, then what is the mean of 128, 255, 511, 1023 and x?

(1) 390 (2) 409

(3) 368 (4) 324

(5) None of these

42. The average age of a group of 10 students was 20. The average age increased by 2 years when two new students joined the group. What is the average age of the two new students who joined the group?

(1) 35.5 (2) 27.5

(3) 32 (4) 30

(5) None of these

43. The average of 6 quantities is 12. The average of 4 of them is 9. What is the average of the remaining two numbers?

(1) 14 (2) 12.75

(3) 14.25 (4) 15

(5) None of these

44. The average of 20 numbers is zero. One of them, at most, how many may be greater than zero?

(1) 15 (2) 17

(3) 20 (4) 19

(5) None of these

45. The average weight of a group of 30 friends increases by 1 kg when the weight of their football coach was added. If average weight of the group after including the weight of the football coach is 31kgs, what is the weight of their football coach

in kgs?

(1) 61 (2) 30

(3) 64 (4) 60

(5) None of these

46. The arithmetic mean of the 5 consecutive integers starting with's' is 'a'. What is the arithmetic mean of 9 consecutive integers that start with s + 2?

(1) a + 8 (2) a + 6

(3) a + 2.4 (4) a + 5

(5) None of these

47. 10 kg of rice priced at Rs. 12 per kg is mixed with 6 kg of rice priced at Rs.16 per kg. What is the average price of the whole mixture?

(1) 7.5 (2) 10

(3) 8.3 (4) 9

(5) None of these

48. Rahul Ghosh walks from A to B at 8 km/h and comes back from B to A at 12 km/h. What is his average speed for the entire journey?

(1) 9 kmph (2) 9.6 kmph

(3) 10 kmph (4) 12 kmph

(5) None of these

49. In a class of 60 students, the average height of 30 students is 'x' cm and that of the remaining students is 'y' cm. Find the average height of the whole class.

(1) (3x+2y)/2 (2) (x+y)/2

(3) (2x+y)/2 (4) (x+2y)/2

(5) None of these

50. The average of seven consecutive even numbers is 10. If the next three even numbers are included, then what is the new average?

(1) 6.8 (2) 12.2

(3) 11.8 (4) 8.2

(5) None of these

51. The average of the amount of money that 10 girls have is Rs.45. When two more girls join, the average increases by Rs. 2. Find the average amount of the two new girls.

(1) 57 (2) 47

(3) 60 (4) 50

(5) None of these

52. The average weight of seven members of a family is 18 kg. If the head of the family is not considered, the average weight of the others would be 5 kg less. The weight of the head of the family is

(1) 55kg (2) 50kg

(3) 48 kg (4) 60kg

(5) None of these

53 What is the average of the first 15 multiples of 3?

(1) 30 (2) 15

(3) 27 (4) 21

(5) None of these

54. The average age of 7 members of the family is 25 years. If one of the members, whose age is 28 years, is excluded, then others are in the ratio 1:2:3:4:5:6. Find the age of the eldest member of the family.

(1) 42 years (2) 62 years

(3) 58 years (4) 48 years

(5) None of these

55. 5 kg of rice priced at Rs. 10 per kg is mixed with 6 kg of rice priced at Rs.12 per kg. What is the average price of the whole mixture?

(1) Rs. 4.5/kg (2) Rs. 4.8/kg

(3) Rs.5.5/kg (4) Rs. 5.54/kg

(5) None of these

56. The average weight of five members of a team is 20 kg. If the captain of the team is not considered, the average weight of the others would be 4 kg less. The weight of captain is

(1) 44 (2) 36

(3) 40 (4) 38.6

(5) None of these

57. The average of 50 numbers is 30. If two numbers, 35 and 40 are discarded, then the average of the remaining numbers is nearly

(1) 29 (2) 28.86

(3) 30 (4) 29.68

(5) None of these

58. The average of five numbers is 27. If one number is excluded, the average becomes 25. The excluded number is

(1) 35 (2) 25

(3) 27 (4) 32.5

(5) None of these

59. The average age of 35 students in a class is 16 years. The average age of 21 students is 14. What is the average age of remaining 14 students?

(1) 18 years (2) 15.5 years

(3) 17 years (4) 19 years

(5) None of these

60. Three years ago, the average age of the family of 5 members was 17 years. Inspite of the birth of a child in the family, the present average age of the family remains the same. The present age of the child is

(1) 2.5 years (2) 3.5 years

(3) 5 years (4) 2 years

(5) None of these

61. A batsman has a certain average of runs for 16 innings. In the 17th inning, he makes a score of 85 runs, thereby increasing his average by 3 runs. What is the average after the 17th inning?

(1) 45 (2) 90

(3) 87 (4) 70

(5) None of these

62. The average age of two-third of the class is 17. What should be the average age of the remaining one-third students so that the average age of the entire class is 20?

(1) 29 years (2) 26 years

(3) 30 years (4) 25 years

(5) None of these

63. In a school, the average weight of 30 girls in a class of 50 students is 16 kg and that of the remaining students is 15.5 kg. What is the average weight of all the students in the class?

(1) 15.5 (2) 15.8

(3) 15.75 (4) 5.9

(5) None of these

64. In what ratio must 35% spirit be mixed with pure spirit to get a resultant solution of 56% spirit?

(1) 56/21 (2) 45/21

(3) 45/35 (4) 44/21

(5) None of these

65. The average weight of five wrestlers in a group is 450 kg. If another wrestler joins the group, then he brings down the average to 400 kg. What is the weight of new wrestler?

(1) 100 kgs (2) 190 kgs

(3) 150 kgs (4) 250 kgs

(5) None of these

66. Anil married 10 years ago at the age of 27 years. His wife was 23 years old then. Six years after their marriage, the average age of Anil, his wife and their son was 22 years. After how many years of Anil marriage was his son born?

(1) 1 (2) 1.6

(3) 2 (4) 2.4

(5) None of these

67. Average age of A, B and C is 84 years however when D joins them, then the average comes down to 80. Now, new person E whose age is 3 years more than D replaces A and the new average is 79 years. What is the age of A?

(1) 60 years (2) 57 years

(3) 65 years (4) 82 years

(5) None of these

68. The average of the first nine prime numbers is

(1) 11.11 (2) 19.3

(3) 14 (4) 13.7

(5) None of these

69. The average of first six numbers is 24 and the average of first five numbers is 20. What is the value of the sixth number?

(1) 40 (2) 24

(3) 32 (4) 30

(5) None of these

70. Average age of A, B and C is 64 years however when D joins them, then the average comes down to 60. Now, new person E whose age is 4 years more than D replaces A and the new average is 59 years. What is the age of A?

(1) 70 years (2) 56 years

(3) 60 years (4) 50 years

(5) None of these

71. What is the average of the square of the first 10 natural numbers?

(1) 1579 (2) 1677.5

(3) 1400 (4) 2144.8

(5) None of these

72. In what ratio must 25% milk be mixed with pure milk to get a resultant solution of 40% milk?

(1) 12/5 (2) 25/40

(3) 14/5 (4) 15/4

(5) None of these

73. The average age of 7 members of the family is 30. If one of the members, whose age is 42 years, is excluded, then others are in the ratio 1:2:3:4:5:6. Find the age of the second eldest member of the family.

(1) 42 years (2) 39 years

(3) 38 years (4) 44 years

(5) None of these

74. The average age of one-third of the class is 27. What should be the average age of the remaining two-third students so that the average age of the entire class is 20?

(1) 18.6 years (2) 22 years

(3) 17 years (4) 16.5 years

(5) None of these

75. What is the average of first 300 natural numbers?

(1) 148 (2) 150.5

(3) 144 (4) 152

(5) None of these

76. The average age of the students in a class is 35 years. If a student whose age is 25, is absent from the class, the average of those present goes up by 1. How many students were there in the class originally?

(1) 11 (2) 16

(3) 13 (4) 15

(5) None of these

77. What is the average of first fifty even numbers?

(1) 2555 (2) 2255

(3) 2550 (4) 2500

(5) None of these

78. 15 litres of pure milk are added to 30 litres of a milk solution containing 15% milk. Find the concentration of the resultant solution.

(1) 82.5% (2) 75.5%

(3) 75% (4) 76.5%

(5) None of these

79. What is the average of first fifty odd numbers?

(1) 2255 (2) 2500

(3) 2550 (4) 2555

(5) None of these

80. Find the average of all the numbers between 6 and 34 which are divisible by 5.

(1) 24.5 (2) 20.25

(3) 25 (4) 22.5

(5) None of these

ANSWERS

1.	1	15.	1	29.	1	43.	5	57.	4	71.	2
2.	3	16.	4	30.	3	44.	4	58.	1	72.	1
3.	1	17.	5	31.	1	45.	1	59.	4	73.	5
4.	3	18.	2	32.	2	46.	2	60.	4	74.	4
5.	3	19.	2	33.	4	47.	3	61.	5	75.	2
6.	1	20.	5	34.	2	48.	2	62.	2	76.	1
7.	1	21.	2	35.	3	49.	2	63.	2	77.	3
8.	2	22.	1	36.	1	50.	5	64.	4	78.	4
9.	1	23.	2	37.	4	51.	1	65.	3	79.	2
10.	2	24.	3	38.	1	52.	3	66.	3	80.	5
11.	1	25.	1	39.	4	53.	5	67.	2		
12.	1	26.	4	40.	2	54.	1	68.	1		
13.	2	27.	3	41.	5	55.	4	69.	5		
14.	2	28.	2	42.	3	56.	2	70.	2		