AVERAGE

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

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

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

   (5) None of these

2. The average salary of 20 workers in an office is ₹ 1900 per month. If the manager's salary is added, the average becomes ₹ 2000 per month. The manager's annual salary (in ₹) is :

   (1) 24000 (2) 25200 (3) 45600

   (4) 84000 (5) None of these

3. In a coconut grove, (x + 2) trees yield 60 nuts per year per tree, x trees yield 120 nuts per year per tree and (x – 2) trees yield 180 nuts per year per tree. If the average yield per year per tree be 100, find x.

   (1) 4 (2) 2 (3) 8

   (4) 6 (5) None of these

4. In a certain primary school, there are 60 boys of age 12 each, 40 of age 13 each, 50 of age 14 each and 50 of age 15 each. The average age (in years) of the boys of the school is :

   (1) 13.50 (2) 13 (3) 13.45

   (4) 14 (5) None of these

5. 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

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

   (1) 12 (2) 10 (3) 16

   (4) 18 (5) None of these

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

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

   (4) Data inadequate (5) None of these

8. The average age of 34 boys in a class is 14 years. If the teacher's age is included the average age of the 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

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

   (1) 27 (2) 28 (3) 21

   (4) 26 (5) None of these

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

    (1) 168 (2) 167 (3) 158

    (4) 161 (5) None of these

11. The average weight of 8 persons increases by 1.5 kg. If a person whose weight is 65 kg is replaced by a new person, what could be the weight of the new persons?

    (1) 76 kg (2) 77 kg (3) 76.5 kg

    (4) Data inadequte (5) None of these

12. 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

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

    (1) 36 (2) 63 (3) 40

    (4) 70 (5) None of these

14. The average of 13 results is 39, that of the first five is 38 and that of the last seven is 6. Find the value of the 6th number.

    (1) 64 (2) 46 (3) 65

    (4) 56 (5) None of these

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

    (1) 32 (2) 30 (3) 34

    (4) 23 (5) None of these

16. A batsman, in his 19th innings, missed a century by 2 runs and thereby increases his average by 3. What is his average after 19 innings.

    (1) 54 (2) 44 (3) 45

    (4) 43 (5) None of these

17. A constant distance from A to B is covered by a man at 40 km/hr. The person rides back the same distance at 30 km/hr. Find his average speed during the whole journey.

    (1) 34 km/hr (2) 35.29 km/hr (3) 34.29 km/hr

    (4) 35 km/hr (5) None of these

18. A person divides his total route of journey into three equal parts and decides to travel the three parts with speeds of 20, 15 and 10 km/hr respectively. Find his average speed during the whole journey.

(1) $13\frac{11}{13}$ km/hr (2) $11\frac{11}{13}$ km/hr (3) $13\frac{3}{13}$ km/hr

(4) $11\frac{3}{13}$ km/hr (5) None of these

19. A person covers 18 km at 6 km/hr, 16 km at 8 km/hr and 30 km at 6 km/hr. Then find the average speed in covering the whole distance.

(1) 6.5 km/hr (2) 6.4 km/hr (3) 6.2 km/hr

(4) 6 km/hr (5) None of these

20. A person runs the first $\frac{1}{4}$ th of the distance of 8 km/hr, the next $\frac{3}{5}$ th at 6 km/hr and the remaining distance at 10 km/hr. Find his average speed.

(1) 17 km/hr (2) 17.87 km/hr (3) 17.78 km/hr

(4) 18.5 km/hr (5) $6\frac{98}{117}$ km/hr

21. The average salary of the entire staff in a office is ₹ 130 per month. The average salary of officers is ₹ 540 and that of non-officers is ₹ 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

22. There were 42 students in a hostel. If the number of students increases by 7, the expenses of the mess increase by ₹ 32.5 per day while the average expenditure per head diminishes by ₹ 1.5. Find the original expenditure of the mess.

(1) ₹ 636 (2) ₹ 536 (3) ₹ 630

(4) ₹ 656 (5) None of these

23. There were 36 students in a hostel. If the number of students increases by 4, the expenses of the mess increase by ₹ 32 per day while the average expenditure per head diminishes by Re. 1. Find the original expenditure of the mess.

(1) ₹ 640 (2) ₹ 648 (3) ₹ 650

(4) ₹ 658 (5) None of these

24. The average of Suresh's marks in English and History is 55. His average of marks in English and Science is 65. What is the difference between the marks which he obtained in History and Science?

(1) 40 (2) 60 (3) 20

(4) Data inadequate (5) None of these

25. The average marks scored by Ganesh in English, Science, Mathematics and History is less than 15 from that scored by him in English, History, Geography and Mathematics. What is the difference of marks in Science and Geography scored by him?

(1) 40 (2) 50 (3) 60

(4) Data inadequate (5) None of these

26. The average temperature of Monday, Tuesday and Wednesday was 40°C. The average of Tuesday, Wednesday and Thursday was 41°C. That for Thursday being 42°C, what was the temperature on Monday?

(1) 39°C (2) 45°C (3) 44°C

(4) 40°C (5) None of these

27. The average attendance of a college for the first three days of a week is 325, and for first four days it is 320. How many were present on the fourth day?

(1) 305 (2) 350 (3) 530

(4) 503 (5) None of these

28. A car runs for t_1 hours at v_1 km/hr, 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) $\frac{v_1t_2 + v_2t_1}{v_1 + v_2}$ km/hr (4) $\frac{v_1 + v_2}{v_1t_1 + v_2t_2}$ km/hr

(5) None of these

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

(1) 600 km/hr (2) 400 km/hr (3) 500 km/hr

(4) 384 km/hr (5) None of these

30. The average are of the three boys is 15 years. Their ages are in the ratio 3 : 5 : 7. Then the age of the oldest is–

(1) 7 years (2) 14 years (3) 20 years

(4) 21 years (5) None of these

31. The population of a town increased by 20% during the first year, by 25% during the next year and by 44% during the third year. Find the average rate of increase during 3 years.

(1) 36.87% (2) 37.68% (3) $38\frac{2}{3}\%$

(4) 40% (5) None of these

32. An investor earns 3% return on $\frac{1}{4}$ th of this capital, 5% on $\frac{2}{3}$ rd and 11% on the remainder. What is the average rate of return he earns on his total capital?

(1) 5% (2) 10% (3) 5.5%

(4) 10.5% (5) None of these

33. The average of 8 readings is 24.3, out of which the average of first two is 18.5 and that of next three is 21.2. If the sixth reading is less than seventh and 8 less than eighth, what is the sixth reading?

(1) 24.8 (2) 26.5 (3) 27.6

(4) 29.4 (5) None of these

34. The average age of a family of 6 members is 22 years. If the age of the youngest member be 7 years, the average age of the family at the birth of the youngest member, was–

(1) 15 years (2) 17 years (3) 17.5 years

(4) 18 years (5) None of these

35. The average age of a husband and wife was 23 years when they were married 5 years age. The average age of the husband, the wife and a child who was born during the interval, is 20 years now. How old is the child now?

(1) 9 months (2) 1 year (3) 3 years

(4) 4 years (5) None of these

36. 5 years age, the average age of A, B, C and D was 45. With E joining them now, the average age of all the five is 49 years. How old is E?

(1) 25 years (2) 40 years (3) 45 years

(4) 64 years (5) None of these

37. The average height of 40 students is 163 cm. On a particular day, three students A, b, C were absent and the average of the remaining 37 students was found to be 162 cm. If A, B have equal heights and the height of C be 2 cm less than that of A, find the height of A.

(1) 176 cm (2) 166 cm (3) 180 cm

(4) 186 cm (5) None of these

38. Out of three numbers, the first is twice the second and is half of the third. If the average of the three numbers is 56, the three numbers in order are :

(1) 48, 96, 24 (2) 48, 24, 96

(3) 96, 24, 48 (4) 96, 48, 24

(5) None of these

39. The average weight of 3 men A, B and C is 84 kg. Another man D joins the group and the average now becomes 80 kg. If another man E, whose weight is 3 kg more than that of D, replaces A, then average weight of B, C, D and E becomes 79 kg. The weight of A is :

(1) 70 kg (2) 72 kg

(3) 75 kg (4) 80 kg

(5) None of these

40. The average age of A and B is 20 years. If C were to replace A, the average would be 19 and if C were to replace B, the average would be 21. What are the ages of A, B and C respectively?

(1) 22, 18, 20 (2) 18, 22, 20

(3) 22, 20, 18 (4) 18, 20, 22

(5) 24, 20, 22

AVERAGE

1. (1)	**2.** (5)	**3.** (1)	**4.** (3)	**5.** (3)	**6.** (1)	**7.** (1)	**8.** (3)	**9.** (1)	**10.** (1)
11. (2)	**12.** (1)	**13.** (2)	**14.** (3)	**15.** (1)	**16.** (2)	**17.** (5)	**18.** (1)	**19.** (2)	**20.** (4)
21. (2)	**22.** (1)	**23.** (2)	**24.** (3)	**25.** (3)	**26.** (1)	**27.** (1)	**28.** (2)	**29.** (4)	**30.** (4)
31. (2)	**32.** (1)	**33.** (3)	**34.** (4)	**35.** (4)	**36.** (3)	**37.** (1)	**38.** (2)	**39.** (3)	**40.** (1)