Practice Exercise

Level - I

1. 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 one year. What is the age of the class teacher?
(a) 50 years (b) 45 years
(c) 40 years (d) Data inadequate

2. The average age of 36 students in a group is 14 years. When teacher's age is included in it, the average increases by one. What is the teacher's age in years?
(a) 31 (b) 36
(c) 51 (d) cannot be determined

3. A school has 4 section of Chemistry in Class X having 40, 35, 45 and 42 students. The mean marks obtained in Chemistry test are 50, 60, 55 and 45 respectively for the 4 sections. Determine the overall average of marks per student
(a) 50.25 (b) 52.25
(c) 51.25 (d) 53.25

4. The average of six numbers is 3.95. The average of two of them is 3.4, while the average of the other two is 3.85. What is the average of the remaining two numbers?
(a) 4.5 (b) 4.6
(c) 4.7 (d) 4.8

5. The average of 5 consecutive numbers is n. If the next two numbers are also included the average will
(a) remain the same (b) increase by 1
(c) increase by 1.4 (d) increase by 2

6. The average of 11 numbers is 10.9. If the average of the first six numbers is 10.5 and that of the last six numbers is 11.4, then the middle number is :
(a) 11.5 (b) 11.4
(c) 11.3 (d) 11.0

7. The average temperature for the first four days of a week is 40.2°C and that of the last four days is 41.3°C. If the average temperature for the whole week is 40.6°C, then the temperature on the fourth day is
(a) 40.8°C (b) 38.5°C
(c) 41.3°C (d) 41.8°C

8. A person covers half his journey by train at 60 kmph, the remainder half by bus at 30 kmph and the rest by cycle at 10 kmph. Find his average speed during the entire journey.
(a) 36 kmph (b) 24 kmph
(c) 48 kmph (d) None of these

9. The marks obtained by Hare Rama in Mathematics, English and Biology are respectively 93 out of 100, 78 out of 150 and 177 out of 200. Find his average score in percent.
(a) 87.83 (b) 86.83
(c) 76.33 (d) 77.33

10. P is going to Delhi from Gurgaon by his car at a speed of 40 km/h. While coming back, he returns with a speed of x km/h. What should be the value of x so that his average speed during the intire journey is 80 km/h?
(a) 160 km/h (b) 40 km/h
(c) 120 km/h (d) It is not possible

11. The average age of Mr. and Mrs Sinha at the time of their marriage in 1972 was 23 years. On the occasion of their anniversary in 1976, they observed that the average age of their family had come down by 4 years compared to their average age at the time of their marriage. This was due to the fact that their son Vicky was born during that period. What was the age of Vicky in 1980?
(a) 6 (b) 7
(c) 8 (d) 5

12. A library has an average of 510 visitors of Sunday and 240 on other days. The average number of visitors per day in a month of 30 days beginning with a Sunday is
(a) 250 (b) 276
(c) 280 (d) 285

13. The mean of 30 values was 150. It was detected on rechecking that one value 165 was wrongly copied as 135 for the computation of the mean. Find the correct mean.
(a) 151 (b) 149
(c) 152 (d) None of these

14. The average of 10 numbers is 40.2. Later it is found that two numbers have been wrongly copied. The first is 18 greater than the actual number and the second number added is 13 instead of 31. Find the correct average.
(a) 40.2 (b) 40.4
(c) 40.6 (d) 40.8

15. In 1919, W. Rhodes, the Yorkshire cricketer, scored 891 runs for his country at an average of 34.27; in 1920, he scored 949 runs at an average of 28.75; in 1921, 1329 runs at an average of 36.70. What was his county batting average for the four years?
(a) 36.23 (b) 37.81
(c) 35.88 (d) 28.72

16. The average salary of all the workers in a workshop is ₹8,000. The average salary of 7 technicians is ₹12,000 and the average salary of the rest is ₹ 6,000. The total number of workers in the workshop is :
(a) 21 (b) 20
(c) 23 (d) 22

17. The average monthly salary of employees, consisting of officers and workers, of an organisation is ₹3000. The average salary of an officer is ₹10,000 while that of a

worker is ₹2000 per month. If there are total 400 employees in the organisation, find the number of officers.
(a) 60 (b) 50
(c) 80 (d) 40

18. Of the three numbers, the first is twice the second and the second is twice the third. The average of the reciprocal of the numbers is $\frac{7}{72}$. The numbers are
(a) 16, 8, 4 (b) 20, 10, 5
(c) 24, 12, 6 (d) 36, 18, 9

19. In a bag, there are 150 coins of ₹ 1,50 p and 25 p denominations. If the total value of coins is ₹ 150, then find how many rupees can be constituted by 50 coins.
(a) ₹ 16 (b) ₹ 20
(c) ₹ 28 (d) None of these

20. The average age of a group of persons going for picnic is 16 years. Twenty new persons with an average age of 15 years join the group on the spot due to which their average age becomes 15.5 years. The number of persons initially going for picnic is
(a) 5 (b) 10
(c) 20 (d) 30

21. The average weight of 47 balls is 4 gm. If the weight of the bag (in which the balls are kept) be included, the calculated average weight per ball increases by 0.3 gm. What is the weight of the bag?
(a) 14.8 gm (b) 15.0 gm
(c) 18.6 gm (d) None of these

22. On an average 300 people watch the movie in Sahu cinema hall on Monday, Tuesday and Wednesday and the average number of visitors on Thursday and Friday is 250. If the average number of visitors per day in the week be 400, then the average number of people who watch the movie in weekends (*i.e.,* on Saturday and Sunday) is
(a) 500 (b) 600
(c) 700 (d) None of these

23. A train travels with a speed of 20 m/s in the first 10 minutes, goes 8.5 km in the next 10 minutes, 11 km in the next 10,8.5 km in the next 10 and 6 km in the next 10 minutes. What is the average speed of the train in kilometer per hour for the journey described?
(a) 42 kmph (b) 35.8 kmph
(c) 55.2 kmph (d) 46 kmph

24. Find the average increase rate if increase in the population in the first year is 30% and that in the second year is 40%.
(a) 41 (b) 56
(c) 40 (d) 38

25. Find the average weight of four containers, if it is known that the weight of the first container is 100 kg and the total of the second, third and fourth containers' weight is defined by $f(x) = x^2 - 3/4\ (x^2)$ where $x = 100$
(a) 650 kg (b) 900 kg
(c) 750 kg (d) 450 kg

26. The average age of a group of 14 persons is 27 years and 9 months. Two persons, each 42 years old, left the group. What will be the average age of the remaining persons in the group?
(a) 26.875 years (b) 26.25 years
(c) 25.375 years (d) 25 years

27. A school has only four classes that contain 10,20,30 and 40 students respectively. The pass percentage of these classes are 20%, 30%, 60% and 100% respectively. Find the pass % of the entire school.
(a) 56% (b) 76%
(c) 34% (d) 66%

28. Find the average of $f(x), g(x), h(x), d(x)$ at $x = 10$. $f(x) = x^2 + 2$, $g(x) = 5x^2 - 3$, $h(x) = \log x^2$ and $d(x) = (4/5)x^2$.
(a) 170 (b) 170.25
(c) 70.25 (d) 70

29. The average of 'n' numbers is z. If the number x is replaced by the number x^1, then the average becomes z^1. Find the relation between n, z, z^1, x and x^1.
(a) $\frac{z^1 - 2}{x^1 - x} = \frac{1}{n}$ (b) $\frac{x^1 - x}{z^1} = \frac{1}{n}$
(c) $\frac{z - z^1}{x - x^1} = \frac{1}{n}$ (d) $\frac{x - x^1}{z - z^1} = \frac{1}{n}$

30. A man's average expenditure for the first 4 months of the year was ₹ 251.25. For the next 5 months the average monthly expenditure was ₹ 26.27 more than what it was during the first 4 months. If the person spent ₹ 760 in all during the remaining 3 months of the year, find what percentage of his annual income of ₹ 3000 he saved in the year.
(a) 14% (b) –5.0866%
(c) 12.5% (d) None of these

31. *A* curious student of Statistics calculated the average height of all the students of his class as *A*. He also calculated the average of the average heights of all the possible pairs of students (two students taken at a time) as *B*. Further, he calculated the average of the average heights of all the possible triplets of students (three students taken at a time) as *C*. Which of the following is true of the relationship among *A*, *B* and *C*?
(a) $A + 2B = C$ (b) $A + B = 2C$
(c) $A = B = 3C$ (d) None of these

32. We write down all the digits from 1-9 side by side. Now we put '+' between as many digits as we wish to, so that the sum of numbers become 666. It is explained below
1 2 3 4 5 6 7 8 9 = 666
Now suppose we put plus signs at following places.
12 + 345 + 67 + 89 = 513
Since there are four numbers, so the average can be calculated by dividing the sum by 4. What is the average if the sum is 666?
(a) 166.5 (b) 111
(b) 133.2 (d) Cannot be determined

33. What will be the average of the followings set of scores ?
59, 84, 44, 98, 30, 40, 58 [*SBI Clerk-June-2012*]
(a) 62 (b) 66
(c) 75 (d) 52
(e) 59

34. Average of five numbers is 61. If the average of first and third number is 69 and the average of second and fourth number is 69, what is the fifth number ? [*SBI Clerk-2012*]
(a) 31 (b) 29
(c) 25 (d) 35
(e) None of these

35. Average weight of 19 men is 74 kgs, and the average weight of 38 women is 63 kgs. What is the average weight (rounded off to the nearest integer) of all the men and the women together ? [*SBI Clerk-2012*]
(a) 59 kgs. (b) 65 kgs.
(c) 69 kgs. (d) 67 kgs.
(e) 71 kgs.

36. The average age of 60 boys in a class was calculated as 12 years. It was later realised that the actual age of one of the boys in the class was 12.5 years but it was calculated as 14 years. What is the actual average age of the boys in the class ? [*SBI Clerk-2014*]
(a) 11 years (b) 11.275 years
(c) 11.50 years (d) 11.975 years
(e) None of these

37. The average of three numbers 70, *7 and 5* is 57. If * represents the same digit, then it must be [*SSC-Sub. Ins.-2012*]
(a) 3 (b) 6
(c) 4 (d) 7

38. Three years ago, the average age of a family of 8 members was 30 years. If one child is also included in the family, the present average age of the family remained the same. Then the present age of the child is [*SSC-Sub. Ins.-2012*]
(a) 3 years (b) 4 years
(c) 6 years (d) 1 year

39. The batting average for 30 inings of a cricket player is 40 runs. His highest score exceeds his lowest score by 100 runs. If these two innings are not included, the average of the remaining 28 innings is 38 runs. The lowest score of the player is: [*SSC-Sub. Ins.-2013*]
(a) 15 (b) 18
(c) 20 (d) 12

40. A boy found that the average of 20 numbers is 35 when he writes a number '61' instead of '16'. The correct average of 20 numbers is [*SSC-Sub. Ins.-2014*]
(a) 32.75 (b) 37.25
(c) 34.75 (d) 34.25

41. Out of 20 boys, 6 are each of 1 m 15 cm height, 8 are of 1 m 10 cm and rest of 1 m 12 cm. The average height of all of them is [*SSC-MT-2013*]
(a) 1 m 12 cm (b) 1 m 12.1 cm
(c) 1 m 21.1 cm (d) 1 m 21 cm

42. Average of first five prime numbers is [*SSC-MT-2013*]
(a) 3.6 (b) 5.3
(c) 5.6 (d) 5

43. A batsman in his 12th innings makes a score of 63 runs and there by increases his average scores by 2. What is his average after the 12th innings? [*SSC 10+2-2012*]
(a) 13 (b) 41
(c) 49 (d) 87

44. The average of four consecutive even numbers is 9. Find the largest number. [*SSC 10+2-2012*]
(a) 12 (b) 6
(c) 8 (d) 10

45. The average weight of 12 crewmen in a boat is increased by $\frac{1}{3}$ kg, when one of the crewmen whose weight is 55 kg is replaced by a new man. What is the weight of that new men (in kg) ? [*SSC 10+2-2012*]
(a) 58 (b) 60
(c) 57 (d) 59

46. The average of 30 numbers is 40 and that of other 40 numbers is 30. The average of all the numbers is [*SSC 10+2-2013*]
(a) 34.5 (b) $34\frac{2}{7}$
(c) 35 (d) 34

47. The average salary of all the workers in a workshop is ₹ 8,000. The average salary of 7 technicians is ₹ 12,000 and the average salary of the rest is ₹ 6,000. The total number of workers in the workshop is [*SSC 10+2-2014*]
(a) 20 (b) 21
(c) 22 (d) 23

48. 3 years ago the average age of a family of 5 members was 17 years. A baby having been born, the average age of the family is the same today. The present age of the baby is [*SSC 10+2-2014*]
(a) 1 year (b) 1½ years
(c) 2 years (d) 3 years

49. Find the average of the following set of scores :
432, 623, 209, 378, 908, 168 [*IBPS Clerk-2012*]
(a) 456 (b) 455
(c) 453 (d) 458
(e) None of these

50. The average of five numbers is 34.4. The average of the first and the second number is 46.5. The average of the fourth and the fifth number is 18. What is the third number ? [*IBPS Clerk-2012*]
(a) 45 (b) 46
(c) 42 (d) 49
(e) None of these

51. What will be the average of the following set of scores ?
78, 69, 54, 21, 94, 48, 77 [*IBPS Clerk-2012*]
(a) 63 (b) 66
(c) 67 (d) 64
(e) None of these

52. The average score of a cricketer for 13 matches is 42 runs. If his average score for the first 5 matches is 54, then what is his average score (in runs) for last 8 matches? [*IBPS Clerk-2013*]
(a) 37 (b) 39
(c) 34.5 (d) 33.5
(e) 37.5

Level - II

1. 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 *D*, replaces *A* then the average weight of *B*, *C*, *D* and *E* becomes 75 kg. The weight of A is
(a) 70 kg (b) 72 kg
(c) 79 kg (d) 78 kg

2. In Arun's opinion, his weight is greater than 65 kg but less than 72 kg. His brother does not agree with Arun and he thinks that Arun's weight is greater than 60 kg but less than 70 kg. His mother's view is that his weight cannot be greater than 68 kg. If all of them are correct in their estimation, what is the average of different probable weights of Arun?
(a) 67 kg (b) 68 kg
(c) 69 kg (d) None of these

3. There are five boxes in a cargo hold. The weight of the first box is 200 kg and the weight of the second box is 20% higher than the weight of the third box, whose weight is 25% higher than the first box's weight. The fourth box at 350 kg is 30% lighter than the fifth box. Find the difference in the average weight of the four heaviest boxes and the four lightest boxes.
(a) 51.5 kg (b) 75 kg
(c) 37.5 kg (d) 112.5 kg

4. Of the three numbers, the average of the first and the second is greater than the average of the second and the third by 15. What is the differnce between the first and the third of the three numbers?
(a) 15 (b) 45
(c) 60 (d) None of these

5. The average monthly expenditure of Ravi was ₹1100 during the first 3 months, ₹2200 during the next 4 months and ₹4620 during the subsequent five months of the year. If the total savinig during the year was ₹ 2100, find Ravi's average monthly income.
(a) ₹ 1858 (b) ₹ 3108.33
(c) ₹ 3100 (d) None of these

6. Rajeev earns 3/2 times in January, April, July and October than his average earning of ₹ 600 per month in the rest of the month. So his savings in the January, April, July and October goes to 5/4 times that of the rest months saving of ₹ 400 per month in the year. The average expenditure of per month is:
(a) ₹ 266.66 (b) ₹ 250
(c) ₹. 233.33 (d) ₹ 433.33

7. There were five sections in MAT paper. The average score of Pooja in first 3 sections was 83 and the average in the last 3 sections was 97 and the average of all the sections (*i.e.*, whole paper) was 92, then her score in the third section was
(a) 85 (b) 92
(c) 88 (d) None of these

8. Mr. Anant Roy, the renowned author, recently got his new novel released. To his utter dismay he found that for the 1,007 pages on an average there were 2 mistakes every page. While, in the fist 612 pages there were only 434 mistakes, they seemed to increase for the latter pages. Find the average number of mistakes per page for the remaining pages.
(a) 6 (b) 4
(c) 2 (d) None of these

9. In hotel Trident, the rooms are numbered from 101 to 130 on the first floor, 221 to 260 on the second floor and 306 to 345 on the third floor. In the month of June 2012, the room occupancy was 60% on the first floor, 40% on the second floor and 75% on the third floor. If it is also known that the room charges are ₹ 200, ₹ 100 and ₹ 150 on each of the floors, then find the average income per room for the month of June 2012.
(a) ₹ 151.5 (b) ₹ 88.18
(c) ₹ 78.3 (d) ₹ 65.7

10. The average age of a couple is 25 years. The average age of the family just after the birth of the first child was 18 years. The average age of the family just after the second child was born was 15 years. The average age of the family after the third and the fourth children (who are twins) were born was 12 years. If the present average age of the family of six persons is 16 years, how old is the eldest child ?
(a) 6 years (b) 7 years
(c) 8 years (d) 9 years

11. The average monthly rainfall for a year in Guntur district is 2.7 inches, the average for the first 7 months is 1.1 inches less than the annual average. If the total rainfall for the next 4 months is 20.8 inches, then the rainfall in the last month will be
(a) 0.1 inch (b) 0.2 inch
(c) 0.4 inch (d) 0.6 inch

12. Eleven years earlier the average age of a family of 4 members was 28 years. Now the age of the same family with six members is yet the same, even when 2 children were born in this period. If they belong to the same parents and the age of the first child at the time of the birth of the younger child was same as there were total family members just after the birth of the youngest members of this family, then the present age of the youngest member of the family is
(a) 3 years (b) 5 years
(c) 6 years (d) None of these

13. The average earning of a group of persons is ₹ 50 per day. The difference between the highest earning and lowest earning of any two persons of the group is ₹ 45. If these two people are excluded the average earning of the group decreased by ₹ 1. If the minimum earning of the person in

the group lies between 42 and 47 and the number of persons initially in the group was equal to a prime number, with both its digits prime. The number of persons in the group initially was:

(a) 29 (b) 53
(c) 31 (d) None of these

14. The class X of a Vidhyalaya has four sections: A, B, C and D. The average weight of the students of A, B, C together and A, C, D together are 45 kg and 55 kg respectively, while the average weight of the students of A, B, D together and B, C, D together are 50kg and 60kg respectively. Which of the following could be the average weight of the students of all the four sections together?

(a) 47.6 kg (b) 52.5 kg
(c) 53.7 kg (d) 56.5 kg

15. The average market price of three shares x, y and z is ₹m. Shares x and y lose ₹ n each and z gains ₹$\frac{n}{2}$. As a result, the average market price of the three shares decrease by ₹ 1. The value of n is

(a) 2 (b) 3
(c) 4 (d) dependent of x

16. The average marks in English subject of a class of 24 students is 56. If the marks of three students were misread as 44, 45 and 61 of the actual marks 48, 59 and 67 respectively, then what would be the correct average? [*IBPS-PO-2011*]

(a) 56.5 (b) 59
(c) 57.5 (d) 58
(e) None of these

17. In an Entrance Examination Ritu scored 56 percent marks, Smita scored 92 percent marks and Rina scored 634 marks. The maximum marks of the examination are 875. What are the average marks scored by all the three girls together? [*IBPS-PO-2011*]

(a) 1929 (b) 815
(c) 690 (d) 643
(e) None of these

18. A batsman makes a score of 58 runs in the 15th innings and thus increases his average by 3 runs. What is the average after 15th inning? [*SSC CGL-2012*]

(a) 12 (b) 14
(c) 16 (d) 18

19. The average of 5 consecutive numbers is n. If the next two numbers are also included, the average of the 7 numbers will [*SSC CGL-2012*]

(a) increase by 2 (b) increase by 1
(c) remain the same (d) increase by 1.4

20. Out of 40 boys in a class, average weight of 30 is 60 kg and the average weight of the remaining is 56 kg. The average weight (in kilogram) of the whole class is [*SSC CGL-2013*]

(a) 58.5 (b) 58
(c) 57 (d) 59

21. The average of the first five multiples of 7 will be [*SSC CGL-2013*]

(a) 14 (b) 21
(c) 17.5 (d) 24.5

22. The average age of boys in the class is twice the number of girls in the class. The ratio of boys and girls in the class of 50 is 4 : 1. The total of the ages (in years) of the boys in the class is [*SSC CGL-2014*]

(a) 2000 (b) 2500
(c) 800 (d) 400

23. There are 100 students in 3 sections A, B and C of a class. The average marks of all the 3 sections was 84. The average of B and C was 87.5 and the average marks of A is 70. The number of students in A was [*SSC CGL-2014*]

(a) 30 (b) 35
(c) 20 (d) 25