

Exercise 7.5

1. The mean of eleven observations is 65. If the mean of first six observations is 63 and that of last 6 observations is 66, find the sixth observation.
2. A cricket team has a mean score of 58 runs in nine innings. Find out how many runs are to be scored in the tenth inning to raise the mean score to 61.
3. The mean of 100 students was found to be 40. Later on it was discovered that a score of 53 was misread as 83. Find the correct mean.
4. Find the sum of deviations of the variety values 3, 4, 6, 7, 8, 14 from their mean.
5. The mean of 11 results is 30. If the mean of first 6 results is 28 and that of the last 6 results is 32, find the 6th result.
6. The mean weight of 60 students of a class is 52.75 kg. If the mean weight of 25 students of this class is 51 kg, find the mean weight of remaining 35 students of the class.
7. The mean of monthly salary of 10 members of a group is ₹ 1,445. One more member whose monthly salary is ₹ 1,500 has joined the group. Find the mean of monthly salary of 11 members of the group.
8. The mean of 200 items was 50. Later on, it was discovered that the two items were misread as 92 and 8 instead of 192 and 88. Find out the correct mean.
9. The mean height of 20 students is 155 cm. It is discovered later on that while calculating the mean, the reading 149 cm was wrongly read as 189 cm. Find the correct mean height.
10. If the mean of five numbers is 7, find the mean of another five numbers which are obtained by adding 2 to each of the five numbers.
11. The marks obtained by 8 students in a test are 20, 15, 11, 17, 21, 24, 10, 14. Find
 - (i) The mean of their marks.
 - (ii) The mean of their marks when the marks of each student are increased by 4.
12. The mean of 10 numbers is 20. If 5 is subtracted from every number, what will be the new mean?
13. The mean of n observations x_1, x_2, \dots, x_n is \bar{x} . If $(a - b)$ is added to each of the observations, show that mean of the new set of observations is $\bar{x} + (a - b)$.
14. If \bar{x} is the mean of first ten natural numbers $x_1, x_2, x_3, \dots, x_{10}$, show that $(x_1 - \bar{x}) + (x_2 - \bar{x}) + \dots + (x_{10} - \bar{x}) = 0$.
15. (a) Given that the mean of five numbers is 28. If one of the numbers is excluded, the mean gets reduced by 2. Determine the excluded number.
(b) The mean of n numbers is 5. If the number 13 is now included with the n numbers, the new mean is 6. Find the value of n .
16. A school has four sections of class X having 40, 35, 45 and 42 students.

Teach san ban

The mean marks obtained in mathematics test are 50, 45, 40 and 30 respectively for the four sections. Determine the overall average of marks per student.

17. The average score of boys in an examination of a school is 71 and that of girls is 73. The average score of the school in that examination is 71.8. Find the ratio of the number of boys to the number of girls appeared in the examination.
18. The mean weight of 150 students in a certain class is 60 kg. The mean weight of boys in the class is 70 kg and that of the girls is 55 kg. Find the number of boys and the number of girls in the class.
19. The number of students in section X-A and X-B are 30 and 35 respectively. The scores of the students in Mathematics test are as follows :

X-A	X-B	X-A and X-B (Combined)
70	?	62

Find the mean score of students of X-B.

20. The mean monthly salary paid to all employees in a certain company was ₹ 600. The mean monthly salaries paid to the male and female employees were ₹ 620 and ₹ 520 respectively. Obtain the percentage of male and female employees in the company.

Answers

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| 1. 59 | 2. 88 | 3. 39.7 | 4. 0 |
| 5. 30 | 6. 54 kg | 7. ₹ 1450 | 8. 50.9 |
| 9. 153 | 10. 9 | 11. (i) 16.5 | (ii) 20.5 |
| 12. 15 | 15. (a) 36 | (b) 7 | 16. 40.95 |
| 17. $n_1 : n_2 = 3 : 2$ | | | |
| 18. No. of boys = 50 ; No. of girls = 100 | | | |
| 19. 55 | 20. 80%; 20% | | |