Ch-12 Statistics

1. The marks obtained by 17 students in a mathematics test (out of 100) are given as follows – 48, 66, 68, 49, 91, 72, 64, 46, 90, 79, 76, 82, 65, 96, 100, 82, 100. Find the range of the data.
2. What is the class-mark of the class 130 – 150.
3. Calculate the median of – 152, 155, 160, 144, 145, 148, 147, 149, 150.
4. What is the median of 70, 40, 50, 100, 75, 75, 65 and 95?
5. Form a frequency table for the following –

Marks Obtained	Number of Students
More than 50	0
More than 40	20
More than 30	37
More than 20	44
More than 10	46
More than 0	50

6. If the mean of 8, 5, 2, x, 6, 5 is 6, then find the value of x.
7. The mean of 40 numbers was found to be 35. Later on, it was detected that a number 56 was misread as 16. Find the correct mean of the given numbers.
8. A train travels between two stations x and y. While going from x to y, its average speed is 72 km per hour, and while coming back from y to x, its average speed is 63 km per hour. Find the average speed of the train during the whole journey.
9. Find the mode for the following data using the relation – mode = (3 median – 2 mean)

Item (x)	Frequency (f)
16	1
17	1
18	3
19	4
20	1
21	2

10. The mean of 100 observations is 50. If one of the observation which was 50 is replaced by 150 then what will be the resulting mean?
11. There are 50 numbers. Each number is subtracted from 53 and the mean of the numbers so obtained is found to be –3.5. What is the mean of given numbers?
12. What is the mean of first 10 natural numbers?
13. The mean of 10, 15, x, 5, 15 is 15. What is the value of x?
14. In the frequency distribution given below, what is the cumulative frequency corresponding to class 40 – 50?

Class Intervals	Frequencies
0 – 10	5
10 – 20	15
20 – 30	10
30 – 40	2
40 – 50	3

15. What is the median of the data 10, 16, 7, 9, 8, 4 and 12?
16. What is the mode of the observations 11, 8, 10, 8, 15, 6, 7, 8, 12, 7 and 9?
17. What is mode of the data 14, 20, 19, 14, 15, 16, 15, 14, 15, 18, 19, 14, 15, 18, 15?
18. What is median of the following numbers – 4, 3, 4, 5, 12, 7, 7, 6, 7?
19. What is the median of the data 78, 56, 22, 34, 45, 54, 39, 68, 54, 84?
20. The width of each of five continuous classes in a frequency distribution is 5 and the lower class limit of the lowest class is 10. What is the upper class limit of the highest class?
21. If the mean of the following data is 18.75, then find the value of p.

x_i	10	15	p	25	30
f_i	5	10	7	8	2

22. If the marks of 41 students of a class are given in the following table, then find the median of marks obtained.

Marks Obtained	Frequency
30	10
25	2
27	5
40	4
32	12
35	8

23. Five people were asked about the time in a week they spend in doing social work in their community. They said 10, 7, 13, 20, and 15 hours, respectively. Find the mean (or average) time in a week devoted by them for social work.
24. Find the mean of the marks obtained by 30 students of class IX of a school. The marks are – 10, 20, 36, 92, 95, 40, 50, 56, 60, 70, 92, 88, 80, 70, 72, 70, 36, 40, 36, 40, 92, 40, 50, 50, 56, 60, 70, 60, 60, 88.
25. Find the mean of the following data.

x_i	11	12	13	14	15	16	17	18
f_i	10	1	3	4	8	10	3	1

26. Find the value of p when the mean of the following data is 21.6.

x_i	6	12	18	24	30	36
f_i	5	4	p	6	4	6

27. The heights (in cm) of 9 students of a class are as follows – 155, 160, 145, 149, 150, 147, 152, 144, 148. Find the median of this data.
28. The points scored by the team of kabaddi in a series of matches are as follows – 17, 2, 7, 27, 15, 5, 14, 8, 10, 24, 48, 10, 8, 7, 18, 28. Find the median of the points scored by the team.
29. Find the mode of the following marks (out of 10) obtained by 20 students – 4, 6, 5, 9, 3, 2, 7, 7, 6, 5, 4, 9, 10, 10, 3, 4, 7, 6, 9, 9.
30. In a small unit of a factory, 5 employees (a supervisor and four labourers) are working. The labourers draw a salary of Rs. 5000 per month each while the supervisor gets Rs. 15,000 per month. Calculate the mean, median and mode of the salaries of the unit of the factory.