

ASSIGNMENT**CLASS X****STATISTICS**

1. Find the mean of the following frequency distribution :

<i>Class</i>	0-20	20-40	40-60	60-80	80-100
<i>Frequency</i>	15	18	21	29	17

2. Find the mean of the following frequency distribution :

<i>Class Interval</i>	10-30	30-50	50-70	70-90	90-110
<i>Frequency</i>	90	20	30	20	40

3. Find the mean of the following frequency distribution :

<i>Class Interval</i>	0-20	20-40	40-60	60-80	80-100	100-120
<i>Frequency</i>	20	35	52	44	38	31

4. Find the mean of the following frequency distribution :

<i>Class</i>	4-8	8-12	12-16	16-20	20-24	24-28	28-32	32-36
<i>No. of students</i>	2	12	15	25	18	12	13	3

5. Find the mean of the following frequency distribution :

<i>Class Interval</i>	0-50	50-100	100-150	150-200	200-250	250-300
<i>Frequency</i>	17	35	43	40	21	24

6. Compute the mean for the following data :

<i>Marks (less than)</i>	10	20	30	40	50	60	70	80
<i>No. of students</i>	12	19	35	47	58	65	84	100

7. Compute the mean for the following data :

<i>Marks (More than)</i>	0	10	20	30	40	50
<i>No. of students</i>	100	95	70	20	5	0

8. If the mean of the following distribution is 54, find the value of p :

<i>Class</i>	0-20	20-40	40-60	60-80	80-100
<i>Frequency</i>	7	p	10	9	13

9. If the mean of the distribution is 57.6 and the sum of its observations is 50, find the missing frequencies f_1 and f_2 .

<i>Class</i>	0-20	20-40	40-60	60-80	80-100	100-120
<i>Frequency</i>	7	f_1	12	f_2	8	5

10. The mean of the following frequency table is 50. But the frequencies f_1 and f_2 in class 20-40 and 60-80 are missing. Find the missing frequencies.

<i>Class</i>	0-20	20-40	40-60	60-80	80-100	Total
<i>Frequency</i>	17	f_1	32	f_2	19	120

11. Find the mode for the following distribution table :

<i>Class Interval</i>	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80
<i>Frequency</i>	7	14	13	12	20	11	15	8

12. The following table shows the ages of the patients admitted in a hospital during a year :

<i>Age (in years)</i>	5-15	15-25	25-35	35-45	45-55	55-65
<i>No. of patients</i>	6	11	21	23	14	5

Find the mode and the mean of the data given above. Compare and interpret the two measures of central tendency.

13. Calculate the mode of the following distribution :

<i>Marks</i>	80-90	90-100	100-110	110-120	120-130	130-140	140-150
<i>No. of Students</i>	18	27	48	39	12	6	16

14. The following table shows the marks obtained by 100 students of class X in a school during a particular academic session. Find the mode of this distribution.

Marks	No. of Students
Less than 10	7
Less than 20	21
Less than 30	34
Less than 40	46
Less than 50	66
Less than 60	77
Less than 70	92
Less than 80	100

15. The mode of the following distribution is 43.75. Find the missing frequency p .

<i>Class Interval</i>	20-30	30-40	40-50	50-60	60-70
<i>Frequency</i>	25	47	62	p	10

16. Find the median of the following frequency distribution :

<i>Class Interval</i>	0-10	10-20	20-30	30-40	40-50	50-60
<i>Frequency</i>	5	3	10	6	4	2

17. Calculate the median for the following data :

<i>Marks obtained (less than)</i>	10	20	30	40	50	60
<i>No. of students</i>	6	15	29	41	60	70

18. Calculate the median for the following data :

<i>Marks obtained (more than)</i>	150	140	130	120	110	100	90	80
<i>No. of students</i>	0	12	27	60	105	124	141	150

19. The median of the following distribution is 35, find the value of a and b .

<i>Class Interval</i>	0-10	10-20	20-30	30-40	40-50	50-60	60-70	Total
<i>Frequency</i>	10	20	a	40	b	25	15	170

20. If the median of the following frequency distribution is 32.5, find the values of missing frequencies a and b .

<i>Class Interval</i>	<i>Frequency</i>
0-10	a
10-20	5
20-30	9
30-40	12
40-50	b
50-60	3
60-70	2
Total	40

21. Calculate the mean, the median and the mode of the following distribution :

<i>Age (in years)</i>	12	13	14	15	16	17	18
<i>No. of Students</i>	2	3	5	6	4	3	2

22. Find the mean and mode of the following data. Also, interpret your result.

<i>Class Interval</i>	10-30	30-50	50-70	70-90	90-110	110-130	130-150
<i>Frequency</i>	3	2	5	4	7	5	4

23. Find the mode and median for the following data. Also interpret your answer.

<i>Class Interval</i>	10-20	20-30	30-40	40-50	50-60	60-70	70-80
<i>Frequency</i>	7	4	6	10	9	8	6

24. Calculate mean, median and mode for the following distribution.

<i>Class Interval</i>	0-10	10-20	20-30	30-40	40-50	50-60
<i>Frequency</i>	2	6	9	7	4	2

25. Calculate the mode and median for the following data :

<i>Class Interval</i>	0-100	100-200	200-300	300-400	400-500	500-600
<i>Frequency</i>	26	37	33	25	18	11

26. The following table shows the weights in gm of a sample of 100 potatoes taken from a large consignment:

<i>Weight</i>	50-60	60-70	70-80	80-90	90-100	100-110	110-120	120-130
<i>Frequency</i>	8	10	12	16	18	14	12	10

Draw the cumulative frequency curve and from it determine the median weight of the potatoes.

27. For the following frequency distribution, draw both the types of cumulative frequency curve on the same graph paper and hence find the median.

<i>Marks obtained</i>	50-60	60-70	70-80	80-90	90-100
<i>No. of students</i>	4	8	12	6	6

28. Draw a 'less than type' cumulative frequency curve for the following data.

<i>Class interval</i>	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40
<i>Frequency</i>	7	10	20	13	17	10	14	9

Hence, estimate the median.

29. Marks scored by 400 students in an examination are as follows :

<i>Marks</i>	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100
<i>No. of Students</i>	10	20	22	40	55	75	80	58	28	12

Draw a 'more than type' cumulative frequency curve and from it determine the median.

30. The table given below shows the distribution of the daily wages, earned by 160 workers in a building site:

<i>Wages (in Rs.)</i>	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80
<i>No. of Workers</i>	12	20	30	38	24	16	12	8

Draw a cumulative frequency curve by using : (i) 'less than type' and (ii) 'more than type'. Hence, estimate the median wages using graph.

ANSWERS

1. 55 2. 50 3. 62.545 4. 19.92 5. 148.61 6. 43
7. 24 8. 11 9. $f_1 = 8, f_2 = 10$ 10. $f_1 = 28, f_2 = 24$ 11. 44.705
12. mode = 36.81 years; mean = 35.37 years 13. 107 14. 44.7
15. 37 16. 27 17. 35 18. 116.67 19. $a = 35, b = 25$ 20. $a = 3, b = 6$
21. Mean = 14.96, Median = 15, Mode = 15 22. mean = 87.3 (approx); Mode = 102
23. mode = 48 ; median = 48 24. mean = 28.6, median = 27.7, mode = 26
25. mode = 173.3 (approx), median = 236.36 (approx)
26. 93 gm 27. 75 28. 20 29. 57.5 30. Rs. 34.73