

CBSE|CLASS X|MATHS WORKSHEET|STATISTICS

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STATISTICS

- 1) If the 'less than ogive' and the 'more than ogive' intersect at (4, 15), then find the median of the data.
- 2) Write the empirical relation between mean, median and mode
- 3) Find the class mark of the modal class interval of the of the data.

Class Interval	0 - 10	10 - 20	20 - 30	30 - 40	40 - 50	50 - 60
Frequency	2	5	4	8	9	7

- 4) If the mode of a distribution is 8 and its mean is also 8, then find median.
- 5) From the given distribution identify the meadian class:

Class	135- 45	140-145	145-150	150-155	155 -160	160 -165
Frequency	4	7	11	6	7	5

- 6) Which mesure of the central tendency is given by the x-coordinate of the point of intersection of the more than ogive and less than ogive?
- 7) Find the median class of the following distribution:

Class	0 - 10	10 - 20	20 - 30	30 - 40	40 - 50	50 - 60	60 - 70
Frequency	4	4	8	10	12	8	4

- 8) Find the class marks of the classes 15.5 - 18.5 and 50 - 75.
- 9) Find Mode for the following data.

Class	1 - 3	3 - 5	5 - 7	7 - 9	9 - 11
Frequency	14	16	2	4	2

- 10) Calculate the median class of the following data.

No of wickets	0 - 2	2 - 4	4 - 6	6 - 8	8 - 10
Number of matches	5	10	32	1	2

- 11) Data of missed catches by a player in 20 matches is as follows:

No.of missed catches	0 - 2	2 - 4	4 - 6
No.of matches	14	4	2

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- 12) The mean of 20 numbers is 13. Find the new mean if each observation is increased by 5.
- 13) The given distribution shows the number of runs scored by some top batsmen of the world in one day International cricket matches.

Runs Scored	No. of batsmen
3000 – 4000	4
4000 – 5000	18
5000 – 6000	9
6000 – 7000	7
7000 – 8000	6
8000 – 9000	3
9000 – 10000	1
10000 - 11000	1

Find the mode of the data.

- 14) In an apple orchard the number of apples on 80 trees is as follows. Find the median of the data.

Number of apples	40 - 60	60 - 80	80 - 100	100 – 120	120 - 140	140 -160	160 -180
Number of trees	12	11	14	16	13	9	5

- 15) The distribution below shows the number of wickets taken by bowlers in one-day cricket matches. Find the mean number of wickets by choosing a suitable method.

Number of Wickets	20 – 60	60 - 100	100 - 150	150 - 250	250 - 350	350 – 450
Number of bowlers	7	5	16	12	2	3

- 16) The following distribution gives the daily income of 50 workers of a factory.

Daily income (Rs)	100 – 150	150 – 200	200 – 250	250 – 300	300 – 350
No of workers	12	14	8	6	10

Draw a less than type ogive and hence find the median.

- 17) 30 women were examined in a hospital by a doctor and the number of heart beats per minute were recorded and summarized as follows. Find the mean heart beats per minute for

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these women, choosing a suitable method.

No of heartbeats/min	65 – 68	68 – 71	71 – 74	74 – 77	77 – 80	80 – 83	83 – 86
No of women	2	3	4	7	8	4	2

- 18) A student noted the number of cars passing through a spot on a road for 100 periods each of 3 minutes and summarised it in the table given below. Find the mean of the data.

Number of cars	0 - 10	10 - 20	20 - 30	30 - 40	40 - 50	50 - 60	60 - 70	70 - 80
Frequency	7	14	13	12	20	11	15	8

- 19) During the medical check-up of 35 students of a class, their weights were recorded as follows

Weight (in kg)	Number of students
Less than 38	0
Less than 40	3
Less than 42	5
Less than 44	9
Less than 46	14
Less than 48	28
Less than 50	32
Less than 52	35

Draw a less than type ogive for the given data. Hence obtain the median weight from the graph and verify the result by using the formula. What value is depicted by the given data?

- 20) During the free medical check-up organized by a Kendriya Vidyalaya, the heights of 35 students of a class were recorded as follows:

Height (in cm)	Number of Students
Less than 138	0
Less than 140	3
Less than 142	5
Less than 144	9
Less than 146	14
Less than 148	28
Less than 150	32
Less than 152	35

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Draw a less than type ogive for the given data in a graph sheet. Hence, obtain the median height from the graph. Which values are depicted by Kendriya Vidyalayas in such arrangements?

- 21) If the median of the distribution given below is 28.5, find the values of x and y.

Class Interval	Frequency
0-10	5
10-20	X
20-30	20
30-40	15
40-50	Y
50-60	5
Total	60

- 22) If the arithmetic mean of 7, 8, x, 11, 14 is x, then find the value of 'x'.

- 23) If the mean of the data is 15, find the value of 'p'

x	5	10	15	20	25
f	6	p	6	10	5

- 24) If x_i 's are the midpoints of the class intervals of a grouped data, f_i 's are the corresponding frequencies and \bar{x} is the mean, then find $\sum f_i(x_i - \bar{x})$.

- 25) The following is the cumulative frequency distribution (of less than type) of 1000 persons each of age of 20 years and above. Determine the mean age.

Age below	30	40	50	60	70	80
No of persons	100	220	350	750	950	1000