

Board – CBSE

Class – 10th

Topic – Statistics

1. In a frequency distribution, if $a =$ assumed mean $= 55$, $\sum f_i = 100$, $h = 10$ and $\sum f_i \mu_i = -30$, then find the mean of the distribution.

2. Determine the missing frequency x , from the following data, when Mode is 67.

Class	40-50	50-60	60-70	70-80	80-90
Frequency	5	x	15	12	7

3. The following data gives the information on the observed life times (in hours) of 150 electrical Components

Lifetime (in hours)	0 – 20	20 – 40	40 – 60	60 – 80	80 – 100
Frequency	15	10	35	50	40

Find the mode of the distribution.

4. Some students of Class X donated for the welfare of old age persons. Their contributions are shown in the following frequency distribution :

Amount (in ₹)	0–20	20–40	40–60	60–80	80–100
No. of students	5	8	12	11	4

Find median and mode for their contribution.

5. The following table gives production yield of rice per hectare in some farms of a village :

Production yield (in kg/hectare)	10-20	20-30	30-40	40-50	50-60
No. of farms	3	9	12	20	6

Draw a 'more than type' ogive. Also, find median from the curve.

6. Draw a 'less than type' ogive for the following frequency distribution.

Class	15 – 20	20 – 25	25 – 30	30 – 35	35 – 40	40 – 45
Frequency	13	18	31	25	15	5

7. In a hospital, during the month of October 2013, number of patients admitted for dengue and their ages are as follows

Age (in years)	0–8	8–16	16–24	24–32	32–40	40–48	48–56	56–64	64–72
No. of patients	10	12	8	25	15	11	21	30	22

Find the mean and median age of patients.

8. The width of 50 leaves of a plant were measured in mm and their cumulative frequency distribution is shown in the following table. Make frequency distribution table for this

Width (in mm)	≥ 20	≥ 30	≥ 40	≥ 50	≥ 60	≥ 70	≥ 80
Cumulative frequency	50	44	28	20	15	7	0

9. For the following distribution, draw a 'less than type' ogive and from the curve, find median

Marks obtained	Less than 20	Less than 30	Less than 40	Less than 50	Less than 60	Less than 70	Less than 80	Less than 90	Less than 100
No. of students	2	7	17	40	60	82	85	90	100

10. Find the median of the following data

Class Interval	5–15	15–25	25–35	35–45	45–55	55–65	65–75
Frequency	6	10	16	15	24	8	7

11. Draw a less than type give for the following distribution

Class Interval	1000–1500	1500–2000	2000–2500	2500–3000	3000–3500	3500–4000
Frequency	18	22	25	15	11	9

12. Make a frequency distribution table for the given table:

Marks	Below 10	Below 20	Below 30	Below 40	Below 50	Below 60	Below 70	Below 80	Below 90	Below 100
No. of students	5	9	17	29	45	60	70	78	83	85

13. Convert the following frequency distribution to a more than type cumulative frequency distribution

Marks Obtained	Number of students
0 – 20	5
20 – 40	9
40 – 60	12
60 – 80	8
80 – 100	6

14. The median of the distribution given below is 14.4. Find the values of the x, y , if the sum of frequency is 20.

Class Interval	Frequency
0 – 6	4
6 – 12	x
12 – 18	5
18 – 24	y
24 – 30	1

15. Find 'p' if the mean of the given data is 15.45.

Class	Frequency
0 - 6	6
6 - 12	8
12 - 18	p
18 - 24	9
24 - 30	7

16. Calculate mode of the following data

Marks Obtained	No. of students
0 - 20	8
20 - 40	10
40 - 60	12
60 - 80	6
80 - 100	3

17. Find the median by drawing both types of gives.

Class Interval	Frequency
50 - 60	3
60 - 70	5
70 - 80	9
80 - 90	12
90 - 100	6

18. Draw 'less than ogive' and 'more than ogive' for the following distribution and hence find its median

Class	Frequency
20 – 30	8
30 – 40	12
40 – 50	24
50 – 60	6
60 – 70	10
70 – 80	15
80 – 90	25

19. What is the lower limit of the modal class of the following distribution

Age in years	Number of patients
0 – 10	16
10 – 20	13
20 – 30	6
30 – 40	11
40 – 50	27
50 – 60	18