# WORKSHEET

## CLASS : X CHAPTER: STATISTICS

1.The empirical relationship between the three measures of central tendency is……

2. …… Is called a positional average.

3. The point of intersection of the less than ogive and the more than ogive gives us the ……..

4.The point of intersection of the less than ogive and the more than ogive is (36.5,15).The median is……

5.The median and the mode of a data are 62 and 64 respectively. The mean is……..

6. The median and the mean of a data are 52 and 50 respectively. The mode is……..

7. The mean and the mode of a data are 54 and 57 respectively. The median is……..

8.Change the following data to a frequency distribution table:

| Less than 10 | Less than 20 | Less than 30 | Less than 40 | Less than 50 | Less than 60 | Less than 70 | Less than 80 |
|---|---|---|---|---|---|---|---|
| 7 | 16 | 23 | 32 | 42 | 53 | 60 | 75 |

9. Change the following data to a frequency distribution table:

| 0 and above | 10 and above | 20 and above | 30 and above | 40 and above | 50 and above | 60 and above | 70 and above |
|---|---|---|---|---|---|---|---|
| 100 | 92 | 87 | 75 | 52 | 28 | 16 | 4 |

10. The mean of the following data is 38.2. Find the missing frequencies f1 and f2 if the total frequency is 50.

| Classes | 0-10 | 10-20 | 20-30 | 30-40 | 40-50 | 50-60 | 60-70 |
|---|---|---|---|---|---|---|---|
| Frequency | 4 | 4 | F1 | 10 | F2 | 8 | 5 |

(Ans. F1 = 7,f2=12)

11.The mean of the following frequency is 8. Find the value of p.

| X(variable) | 3 | 5 | 7 | 9 | 11 | 13 |
|---|---|---|---|---|---|---|
| F(frequency) | 6 | 8 | 15 | P | 8 | 4 |

(Ans p= 25)

12.Draw the less than ogive and decide the median.

| Classes | 50-60 | 60-70 | 70-80 | 80-90 | 90-100 |
|---|---|---|---|---|---|
| Frequency | 3 | 5 | 9 | 12 | 6 |

(Ans 82 approx)

13. Find the unknown values a,b,c,d,e & f from the following table:

| Height( in cm) | No. of boys | Cumulative Frequency |
|---|---|---|
| 150-155 | 12 | A |
| 155-160 | b | 25 |
| 160-165 | 10 | C |
| 165-170 | d | 43 |
| 170-175 | e | 48 |
| 175-180 | 2 | F |
| Total | 50 | |

14. The median of the following data is 20.75 . Find x & y if the total frequency is 100.

| Classes | 0-5 | 5- 10 | 10-15 | 15-20 | 20-25 | 25-30 | 30-35 | 35-40 |
|---|---|---|---|---|---|---|---|---|
| Frequency | 7 | 10 | X | 13 | y | 10 | 14 | 9 |

(Ans. X= 17, y = 20 )

15.The median of the following data is 525. Find f1 & f2 if the total frequency is 100.

| Classes | 0-100 | 100-200 | 200-300 | 300-400 | 400-500 | 500-600 | 600-700 | 700-800 | 800-900 | 900-1000 |
|---|---|---|---|---|---|---|---|---|---|---|
| Frequency | 2 | 5 | F1 | 12 | 17 | 20 | Y | 9 | 7 | 4 |

(Ans: f1 = 9, f2=15).

16.Find the mean, median and the mode of the following data.

| Monthly consumption (in units) | 65-85 | 85-105 | 105-125 | 125-145 | 145-165 | 165-185 | 185-205 |
|---|---|---|---|---|---|---|---|
| No. of Families | 4 | 5 | 13 | 20 | 14 | 8 | 4 |

(Median=137,Mean 137.05,Mode 135.76)

17. Find the median of the following data.

| Classes | 118-126 | 127-135 | 136-144 | 145-153 | 154-162 | 163-171 | 172-180 |
|---|---|---|---|---|---|---|---|
| Frequency | 3 | 5 | 9 | 12 | 5 | 4 | 2 |

(Ans: 146.75. ***Hint: Make the classes continuous***.)