Statistics: Worksheet -6

1. 100 surnames were randomly picked up from a local telephone directory and the frequency distribution of the number of letters in the English alphabets in the surnames was obtained as follows:

Number of letters	1- 4	4 - 7	7 - 10	10-13	13-16	16 - 19
Number of Surnames	6	30	40	16	4	4

Determine the median number of letters in the surnames. Find the mean number of letters in the surnames? Also, find the modal size of the surnames.

2. If the median of 60 observations given below is 28.5 find the values of x and y

Class interval	0-10	10-20	20-30	30-40	40-50	50-60
Frequency	5	x	20	15	y	5

3. The distribution below gives the weights of 30 students of a class. Find the media weight of the students.

Weight (in kgs)	40-45	45-50	50-55	55-60	60-65	65-70	70-75
Number of students	2	3	8	6	6	3	2

4. The lengths of 40 leaves of a plant are measured correct to the nearest milli meter, and the data obtained is represented in the following table.

Length (in mm)	118-126	127-135	136-144	145-153	154-162	163-171	172-180
Number of leaves	3	5	9	12	5	4	2

Find the median length of the leaves. (Hint: The data needs to be converted to continuous classes for finding the median, since the formula assumes continuous classes. The classes then changes to 117.5 – 126.5, 126.5 – 35.5, ...171.5 – 180.5)