1. If the median of the dataset 𝑥𝑖,𝑖=1,2,...,𝑛*xi* ,*i*=1,2,...,*n*, is 12, what is the median of the dataset 3𝑥𝑖+4,𝑖=1,....,𝑛3*xi* +4,*i*=1,....,*n*?

Ans:  original median is = 12

         After multiplying  3\*12 = 36

         Then add  = 36 + 4 = 40

        New median = 40

2. The sample mean and sample variance of five data values are, respectively 13.6 and 25.8. If three of the data values are 7, 13 and 20, what are the other two data values?

Ans:

11,17

3. The mean of the 20 values in a given dataset is 50. When these values are rearranged in a certain order, the mean of the first 10 values and the last 11 values are 40 and 60 respectively. Find the tenth value after the rearrangement.

Ans:

Mean  = total sum / number of value

Total sum = mean \* number of values

Sum of 20 values = 1000

Sum of  10 values = 400

Sum of 11 values = 660

Let take 10 value is x

Sum of 10 + sum of 11 – x  =  sum of  20

400 + 660 – x = 1000

1060  - 1000 = x

X = 60

10 values is  = 60

4. The median of a set of 21 data points arranged in ascending order is 15. All the data points in the given dataset are greater than 10. If it is noticed that a data point whose value is 13 was incorrectly entered as 11, what will be the revised value of the median?

Ans:

Median  = 15

The middle  value remain same  because it only affect the after 13 th value

5. The mean and population variance of a data 3,8,9,𝑥1, *x*2  are 9 and 13.2 respectively. Find the 75𝑡ℎ percentile for the given dataset.?

75th   percentile  of data is : 10.5

6. Given the dataset: 4,5,x,12,14. The mean is 9.  What is the approximate sample standard deviation of the new dataset after adding 44 to each number of the given dataset?

 Ans:

Mean = total sum/ number of element

Total sum = mean \* number of element

45 = 35 \* x

X = 10

So

Data set after adding 44 each is

48,49,54,56,58