

# Second Homework for 101 stat

**(2 marks)**

1) The following observations have been arranged in ascending order.

29    32    48    50     $x$      $x + 2$     72    78    84    95

Now, if the median of the data is 63, then calculate the value of  $x$

**(4 marks)**

2) Write the name of the best measure of central tendency beside each of the following data sets (the observations have been arranged in ascending order):

32	?	55	55	55	?	72	76	84	95	100
29	?	40	50	55	60	65	75	75	75	?
29	32	40	50	55	63	65	72	75	84	195
29	32	40	50	55	61	65	72	75	84	95

**(4 marks)**

3) Write the name of the best measure of dispersion beside each of the following data sets (the observations have been arranged in ascending order):

32	45	55	55	55	60	72	76	84	95	180
29	?	40	50	55	60	65	75	75	75	?
29	32	40	50	55	63	65	72	75	84	95
29	32	?	50	55	61	65	72	?	84	95

**(11 marks)    One degree of each calculation+ (3 marks) for the notice.**

4) Consider the following two data sets (note that each value of the second data set is obtained by multiplying the corresponding value of the first data set by 2).

**Data set X:**    5    10    15    20    25  
**Data set Y:**    10    20    30    40    50

Then calculate the **mean**, **standard deviation**, **standard score** and the **coefficient of variation** for each of these two data sets. What do you notice?

**(14 marks)**

5) Consider the marks obtained (out of 100 marks) by 50 students of class X of a school:

10	20	36	92	95	40	50	56	60	70
92	88	80	70	72	70	36	40	36	40
92	40	50	50	56	60	70	60	60	88
92	88	80	70	72	70	36	40	36	40
92	40	50	50	56	60	70	60	60	88

Then:

- Calculate the percentile  $P_{93}$ . **(2 mark)**
- Calculate the decile  $D_3$ . **(2 mark)**
- Calculate the quartiles  $Q_1$ ,  $Q_2$  and  $Q_3$ . **(6 marks)**
- Construct the box plot for the given data. **(4 marks)**