

**Seminar 11**

1. The MCC Research Company is undertaking a research on the daily expense of secondary students, a sample of 110 students are selected, and their daily expense are recorded and grouped as followings:

Daily Expense	Frequency
10.5 - 14.9	12
15.0 - 19.4	24
19.5 - 23.9	25
24.0 - 28.4	28
28.5 - 32.9	21

Find the MAD, Variance, and Standard Deviation of the data set.

2. The MCC Research Company is undertaking a research on the daily expense of secondary students, a sample of 20 students are selected, and their daily expense are recorded as followings:

Daily Expense (in dollars)									
14	11	8	15	6	5	11	10	15	8
20	3	14	10	14	25	15	9	4	28

Find the

- a. Range
  - b. MAD
  - c. Variance
  - d. Standard Deviation
  - e. Interquatile Range
  - f. Coefficient of Variation
3. For the given data set:

2	34	20	6	25	87	30	17	8	15
12	22	7	21	15	19	4	31	23	90

- a. state the definition of outlier;
- b. identify any outliers in the data set;
- c. draw a Box-and-Whisker plot for the data set;
- d. calculate the coefficient of skewness;
- e. comment on the data set in term of skewness; and
- f. which one, mean or median, is more appropriate for the central tendency measure of the data set? Why?