

Seminar 10

- 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 Mean, Median, and Mode of the data set.

- Prove that, for any data set X_i , $\sum(X_i - \mu) = 0$

- For the given data set:

3	5	24	17	9
15	10	18	21	8

- find the MAD;
 - find the variance; and
 - find the standard deviation.
- The mean score on the college entrance examination is 500, and the standard deviation is 100. Suppose that the mean score distribution is bell-shaped distribution.
 - What does the Empirical rule say about the number of scores between 300 and 700?
 - What does the Empirical rule say about the number of scores between 200 and 800?
 - What does the Empirical rule say about the number of scores between 200 and 700? Why?
 - The mean score on the college entrance examination is 500, and the standard deviation is 100.
 - For describing the distribution, should the Chebyshev's theorem or the Empirical rule be used? Why?
 - What does the theorem/rule say about the number of scores between 300 and 700?
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