

STAT 319, TERM 073

Home Works for Chapter 1

**Problem 1.**

Diameters of 30 rivet heads in 1/100 of an inch are given below:

6.72	6.77	6.82	6.70	6.78	6.70
6.62	6.75	6.66	6.66	6.64	6.76
6.73	6.80	6.72	6.76	6.76	6.68
6.66	6.62	6.70	6.72	6.74	6.81
6.70	6.72	6.74	6.81	6.74	6.81

- (a) Prepare a Stem-and-leaf plot of the sample, and comment.
- (b) Compute the Mean and Median of the rivets.
- (c) What is the mode diameter of the rivets?
- (d) Compute the sample variance, standard deviation, and range for the rivets.
- (e) Find 93<sup>rd</sup> percentile and interpret this value.
- (f) Do the data satisfy Empirical Rule?
- (g) Draw a box plot and comment.
- (h) Calculate coefficient of variation and comment on it.
- (i) Calculate coefficient of skewness, and comment on it.
- (j) Prepare a relative frequency distribution of the data.
- (k) Calculate z-scores of the smallest and the largest observations in the sample.