Name:_____ **9/11/2019**
Math 173-FG **Quiz 1**

1. Here are 20 measurements.

   1.52164, 3.78586, 6.00574, 6.66092, 7.44297, 1.63493, 6.54875, 1.37472, 3.94679, 6.41819,

   5.40011, 9.24275, 3.18373, 2.08434, 9.13555, 6.73865, 3.26314, 7.61009, 1.42427, 9.18479

   (a) (24 points) Create a relative frequency histogram below using 6 classes of width 1.5. The first class should be $[1.0, 2.5)$.

   (b) (6 points) What proportion of the measurements are less than 5.5?

2. You are given a sample of $n = 6$ measurements: 2.4, 3.4, 4.7, 4.3, 2.4, 6.8.

(a) (8 points) What is the median, m?

(b) (8 points) What is the mean, $\bar{x}$?

(c) (8 points) What is the mode, M?

(d) (8 points) What is the variance, s^2?

(e) (8 points) What is the standard deviation, s?

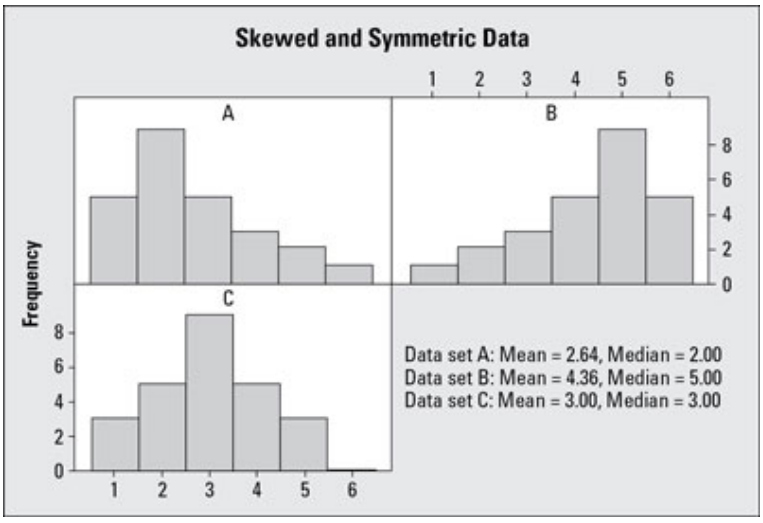
3. (4 points) A data set consists of 240 measurements with a mean $\bar{x} = 32$ and a standard deviation $s = 6$.

   (a) (10 points) Describe the interval that lies within 2.5 standard deviations of the mean.

   (b) (4 points) Using Chevychev's Theorem, what proportion of the data set lies in this interval?

   (c) (4 points) Using Chevychev's Theorem, how many measurements lie in this interval?

4. This question refers to the following three distributions labelled A, B, and C. The mean and median for each distribution is included.



   (a) (4 points) Which of the three distributions is best described as symmetric (A, B, or C)?

   (b) (4 points) Which of the three distributions is best described as left-skewed (A, B, or C)?

   (c) (4 points) Which of the three distributions is best described as sright-skewed (A, B, or C)?