Name: _____   Homework #2

Instructions: Complete all of the questions below. You may use a calculator or pen and paper to complete the homework. Homework is due *Tuesday, September 6* at the beginning of class. You may print and submit the homework, use a separate piece of paper, or email a copy to tomschenkjr at gmail dot com.

1. For each of the following variables, identify whether they are categorical or continuous:
    a. Age
    b. Experienced mental illness
    c. Race
    d. Stock prices
    e. Amount of naproxen (a painkiller) taken in a day (expressed in milligrams)
    f. Unemployment rate (expressed as a percentage)
    g. Whether the Netherlands is a democracy
    h. Percentage of Brazilians living in Bogotá, Columbia

2. For each of the following statements, identify whether it corresponds to descriptive statistics or inferential statistics.
    a. The high school graduation rate in Iowa is 90%
    b. Students from lower incomes are less likely to graduate.
    c. A 1% increase in unemployment reduced gross domestic product by 2 percent.
    d. Iowa's unemployment rate is 6.1% and there were 7 homicides in Des Moines.
    e. Between 5% and 10% of all Amyotrophic Lateral Sclerosis (ALS, a.k.a. Lou Gehrig's disease) are caused by genetic factors.
    f. Colorectal cancer has been decreasing at a rate of 1.6% per year since 1985.

3. On August 29th, 2011, there were 12 homeruns hit in major league with the following distances: 451, 434, 433, 428, 426, 419, 419, 411, 409, 393, 392, 390, 386, 386, 386. Find the following:
    a. Calculate all three measures of centrality (mean, median, mode)
    b. Calculate all five measures of variability (range, quartiles, inter-quartile range, variance, standard deviation).