1. **In each statement, tell whether the descriptive or inferential statistic has been used:**
   a) By 2040 at least 3.5 billion people will run short of water (World Future Society). **Inferential**
   b) Nine out of ten of the job fatalities are men. **Descriptive**
   c) Expenditures for the cable industry were 5.66 billion in 1996. **Descriptive**
   d) Allergy therapy makes bees go away. **Inferential**
   e) Drinking decaffeinated coffee can raise cholesterol levels by 7%. **Inferential**
   f) The national average annual medicine expenditure per person is $1052. **Descriptive**
   g) Experts say the mortgage rates may soon hit bottom. **Inferential**

2. **Identify each of the following data sets as either a population or a sample:**
a. The grade point averages (GPAs) of all students at a college. **Population.**
b. The GPAs of a randomly selected group of students on a college campus. **Sample.**
c. The ages of the nine Supreme Court Justices of the United States on January 1, 1842. **Population.**
d. The gender of every second customer who enters a movie theater. **Sample.**
e. The lengths of Atlantic croakers caught on a fishing trip to the beach. **Sample.**

3. Identify the following variables as either quantitative or qualitative:
a. The 30 high-temperature readings of the last 30 days. **Quantitative**
b. The scores of 40 students on an English test. **Quantitative**
c. The blood types of 120 teachers in a middle school. **Qualitative**
d. The last four digits of social security numbers of all students in a class. **Qualitative**
e. The numbers on the jerseys of 53 football players on a team. **Quantitative**

4. Classify each variable using the appropriate terms from the following list: qualitative, quantitative, *continuous, and discrete*.

a) Weight (in grams) of tomatoes at a grocery store.

 Quantitative, *continuous*

b) Number of times person checks their e-mail per day.

 Quantitative, *discrete*

c) Political party, if any, that a person voted for in the last provincial election. **Qualitative**

d) Voter participation in past federal elections, as a percentage.

Quantitative, *continuous*

e) Daily temperature (in degrees Fahrenheit) for last August.

Quantitative, *continuous*

f) Letter grades (A, B, C, D, or F) that an English 100 class received on their essays. **Qualitative**

5. Identify the data set's level of measurement (nominal, ordinal, interval, ratio):

a) hair color of women on a high school tennis team. **nominal**

b) numbers on the shirts of a girls' soccer team. **nominal**

c) ages of students in a statistics class. **ratio**

d) temperatures of 22 selected refrigerators. **interval**

 e) number of milligrams of tar in 28 cigarettes. **ratio**

f) number of pages in your statistics book . **ratio**

g) marriage status of the faculty at the local community college. **nominal**

h) list of 1247 social security numbers. **nominal**

i) the ratings of a movie ranging from "poor" to "good" to "excellent".
Ordinal

j) The final grades (A,B,C,D, and F) for students in a chemistry class.
Ordinal

k) The annual salaries for all teachers in Utah. **ratio**

l) List of zip codes for Chicago. **nominal**

m) The nationalities listed in a recent survey . **nominal**

n) The amount of fat (in grams) in 44 cookies . **ratio**

o) The data listed on the horizontal axis in the graph. **ratio**