AFM Review Sheet
Univariate Data

The following topics will be on the test:

- o Quantitative vs. Qualitative
- o Histograms and their meaning
- o Measures of central tendency
- o Box plots and their meanings
- o Comparing box plots
- o Standard Deviation

1. Label the following variables as quantitative or qualitative in the given survey questions.

a. What is your ethnic background?
b. What is your birth year?
c. How many pets do you own?
d. What is one event you did over Spring Break?
e. How old were you when you said your first word?
f. Which place did Michael Phelps come in during the 2013 Olympics?
g. How long does it take you to get to school?
h. How many M & M's do you think are in a bag?
i. How tall are you?
j. What are you plans after high school?

2**. In the given questions of Number 2, label the variable as continuous, discrete, ordinal, or categorical.**

a.
b.
c.
d.
e.
f.
g.
h.
i.
j.

3. **Sketch a histogram that is**

a. skewed left   b. skewed right   c. symmetrical   d. contains a possible outlier

4. Choose the measure of central tendency that would *best* describe the following scenarios.

    a. The price of apartments in the Legacy apartment complex.

    b. The age of the people at the nursing home.

    c. The age of people at the symphony.

    d. The grades of all of Mr. Maxwell's classes.

5. A survey was conducted asking students their soft drinks. Create a frequency table for the data given below.

Pepsi	Coke	Mountain Dew	Root Beer	Root Beer	Sprite
Mountain Dew	Coke	Coke	Coke	Pepsi	Sprite
Root Beer	Root Beer	Mountain Dew	Sprite	Root Beer	Pepsi
Pepsi	Coke	Coke	Coke	Sprite	Mountain Dew
Mountain Dew	Mountain Dew	Pepsi	Pepsi	Coke	Mountain Dew
Root Beer	Pepsi	Mountain Dew	Coke	Coke	Mountain Dew

6. The following data was observed by a hotel receptionist at Embassy Suites as the number of people who check into the hotel each hour in the day. Given the following data, determine the mean and the standard deviation.

3,8,7,5,1,2,4,3,7,9,11,13,10,2,3,4,5,3,6,3,4,1,2,5

    a. Mean:_____   b. Standard Deviation:_____

c. Use the same data to create a normal curve that shows the distribution of the number of people who check into the hotel every hour.

d. What interval does the middle 68% lie in?

e. What interval does the top 2% lie in?

7. **Create and use two histograms to compare the girl's data and the boy's data below. Make conclusions on your findings.**

Mr. Brown's math class has 10 girls and 10 boys. Test grades for the most recent test are listed below.

Boys	86	85	34	98	52	68	75	72	84	92
Girls	81	80	80	88	80	86	78	74	71	75

8. During the spring of 2013, Mr. Maxwell's 4th period AFM class measured their height and measured their arm span in centimeters. Use the program "Height" (L1 is the height of every member and L2 is the arm span) to answer the question below.

140	142	156
160	143	150
151	159	159
142	149	149
162	151	158
158	157	160
161	170	150
149	149	151
153	157	148
153	150	162
Students Arm Span (cm)		

141	144	150
161	143	151
153	157	160
140	145	145
160	151	157
157	152	161
161	171	142
148	140	151
150	155	150
150	146	160
Students Height (cm)		

In theory, a person's height is the same as their arm span. Using the data compiled in Mr. Maxwell's AFM class, do you agree or disagree with this theory? Create two box plots to support your answer. Be specific and detailed.