AP Statistics **Chapter Two Exam Study Guide**

This test will consist of 10 multiple-choice and 3 free-response questions and the entire exam is worth 80. You must have your graphing calculator and fully charged chrome book here for this exam as the multiple-choice will be taken through the Moodle Secure Browser on my Moodle page. At any point this year, if you show up for an exam without your required technology items, your participation grade will be impacted for not being prepared!

The following items are on this exam:

1. Box-plots:
   - Interpreting the data by the 5-number summary
   - Checking for outliers mathematically [using already analyzed data]
   - Sketching one correctly and completely
2. Stem-plots:
   - Creating one given a set of data
   - Analyzing a back-to-back stemplot
3. Blast from the Past:
   - Response variables versus explanatory variables as they relate to an experiment
4. Graphical Displays:
   - Choosing the most appropriate
   - Describing displays adequately (OLD or SOCS key points)
5. Reading a histogram
6. Reading a segmented bar graph
7. Mean, median, standard deviation, variance
   - Relating these things with the shape of data [skewness]
   - Understanding standard deviation and what it means.
   - Knowing what happens to these measures when data is transformed
8. Finding a proportion in a two-way table

Practice Problems: for any problems not here, refer to your notes and/or assignments we have had for practice and review

1. Box-plot: checking for outliers, showing the math ! 2, 12, 24, 27,30, 22, 21, 35, 33, 38, 8

a. Use the data above to correctly draw its box-plot and show the math involved in checking for outliers. When finished, describe the data.

b. Between what range exists the bottom 25% of the data?

C. What range accounts for the IQR?

2. You are provided the following results for a set of data: Mean = 12, StdDev = 2.4, Median = 10, n = 20
What shape does this data have and how do you know?

3. If I told you that every item in the data from #2 needed to be multiplied by 5 and then increased by 2, what would the new measurements from #2 be?

Mean_____ StdDev_____ Median_____

4. Given situations, determining which graphical display should be used; choices include: box-plot, scatter plot, stem-plot, dot-plot, histogram

a. Displaying ages of children in a local primary school of 800 children

b. Displaying ages of children in a local primary school of 20 children

c. Displaying data for a person's height related to their age

d. Displaying data comparing weights of offensive linemen to defensive linemen on one football team

e. Displaying weights of people at an airport

f. Displaying the ages of 40 interns at Google

g. Displaying home prices in a 5-square-mile area of Pebble Beach combined with a 5-square mile area of DR Oaks

5. To the right is a segmented bar graph of percent games won by Home –vs- Visitors at a local high school. Answer the following:

a) Which sport seems to be most successful for the home team?

b. True or False: There are more baseball games lost by the home team than the other sporting seasons

c) Approximately how much more often does the hockey home town team win than lose?