AP STATISTICS **Name: _____ Per: ____**

Project – Comparing Numerical Distributions – **DUE DATE: M/TU, NOVEMBER 2/3, 2015**

For this assignment, first come up with an investigative question that will allow you to **compare numerical data between two populations**. A few *examples*:

- Who tends to have more Twitter followers, athletes or non-athletes?
- Do females tend to own more pairs of shoes than males?
- Is there a difference in the amount of tips earned per week between male and female restaurant employees?

a) Think of a topic that deals with NUMERICAL DATA, and get **approval from your teacher** before continuing.

b) Write a survey question that you will ask your subjects. The response MUST be numerical data.
(Example: "How many Twitter followers do you have" or "How many pairs of shoes do you own?")

IMPORTANT: You MUST get approval from your teacher on your survey question before you continue any further!!!

---

c) Ask your survey question to at least 16 people in each group *(for instance, if you are comparing males and females, then you must survey at least 16 males and 16 females).*
RECORD YOUR DATA IN THE TABLE ON THE LAST PAGE OF THIS PACKET.

d) Find the five number summary for each of the two samples. *(You may wish to reorder the values in each list from least to greatest)*

e) Using a calculator, find the mean and standard deviation for each of the two samples.

f) Create either a back-to-back stemplot OR dot plots to display the data for the two samples. **SHOW THE LOCATION OF BOTH THE MEAN AND THE MEDIAN FOR EACH DISTRIBUTION.**

g) Construct parallel box plots to display the data for the two groups. This should include calculations for the 1.5IQR outlier rule for both groups.

h) Write a few sentences describing and comparing the two distributions. Do there appear to be any significant differences between the two groups?

i) For each group, does the mean appear to be a good measure to describe "center"? Or would the median (or something else?) be a better measure of what is "average" in the distribution?

BEFORE YOU TURN IN YOUR PROJECT:

Double check your work, your graphs, and your explanations.

If your teacher hands your project back to you to make fixes, you will lose points.

DOUBLE-CHECK EVERYTHING!

AP Statistics
Project – Comparing Numerical Distributions

GROUP 1: _____

Name (or initials)	
1.	
2.	
3.	
4.	
5.	
6.	
7.	
8.	
9.	
10.	
11.	
12.	
13.	
14.	
15.	
16.	

GROUP 2: _____

Name (or initials)	
1.	
2.	
3.	
4.	
5.	
6.	
7.	
8.	
9.	
10.	
11.	
12.	
13.	
14.	
15.	
16.	