AP Statistics
Unit 1 – Exploring and Understanding Data

Name _____
Date _____

Chapter 4 – Displaying & Summarizing Quantitative Data

Essential Skills & Objectives	Practice	Self-Check		
1. Can you describe the distribution of a quantitative variable using SOCS, including a suitable measure of center and spread based on information about the variable's distribution?	#7, 9, 11, 13, 14, p. 41 #29	☺	😐	☹
2. Can you describe the expected shape of a distribution?	#5, 8, 10	☺	😐	☹
3. Can you explain the concept of standard deviation, including how to calculate it?	p. 42 #15, 34	☺	😐	☹
4. Can you explain how the shape of a graph affects the measures of center and spread (concept of resistance)	#18, 20, 21, 26, 28, 29	☺	😐	☹
5. Can you create an appropriate graphical representation of data, including all scales and labels?	#30, 31, 36, 37, 40, 48	☺	😐	☹

Read Chapter 4 (pgs. 44-71)

A. Explain the difference between a histogram and a bar chart.

B. What are some advantages and disadvantages to using a stemplot?

C. Don't forget!!! Before you graph anything, you should check what type of data it is! If it is categorical, use _____. If it is quantitative, use _____.

D. Describe what the acronym SOCS means:

E. What are the two main measures of "Center" that we use?

F. Explain the concept of resistance. Which measure of center is resistant? Which is non-resistant?

G. What is the Five Number Summary?

H. Which measure of center and spread should we use for skewed data? Why?

I. Which measure of center and spread should we use for symmetric data? Why?

J. What is the relationship between variance and standard deviation?

K. What does it mean if your standard deviation is zero?

L. Can standard deviation be negative? Why or why not?

Recap:

Label each of the distributions below with the appropriate "shape":