2007 AP Statistics Summer Assignment

Purpose: To prepare students for the rigor of the AP Statistics course beginning in the fall, 2007.

Materials: a) Textbook, The Practice of Statistics (Yates, Moore and McCabe, W.H. Freeman & Co., New York, 1999).
b) Use of a computer to find the article "Overstating Aspirin's Role in Breast Cancer Prevention" from the Washington Post website.
c) Questions pertaining to the reading.
d) TI 83, TI83plus, TI84, TI84plus, or TI89 calculator.

ASSIGNMENT – PART I: Reviewing Statistical Concepts

The student will read and master some of the concepts presented in Chapter 1 of the textbook. Students should review some already familiar concepts and master the mechanics of displaying data in a variety of formats. After reading students should know the following the topics and tools: variables – both quantitative and categorical, distribution, distribution shape, symmetry, skewness, outliers, dotplots, histograms, stem plots (a.k.a. stem-and-leaf plots), mean, and median. Many of these concepts are already familiar to students and doing this assignment will refresh their memory. New concepts are easy enough for students to pick up on your own. When class starts in August, only a minimum of time will be spent reviewing the concepts contained in this summer assignment, so make sure to do a thorough job on it!!

1. Read pages 1 – 40 (This is all of section 1.1 and a few pages of section 1.2). Work through the examples presented within each section. Working through these examples will help students do the problems that follow each section.

2. Do the problems listed below. Please attempt each problem. The teacher will address your uncertainties when you return to school. Working with a friend(s) on this assignment is permitted.

p. 7 #1, 2 (use definitions from pgs. 4, 5)

p. 11 #6 a, b only (see example 1.2 pg. 8)

p. 16 #7, 8 (see ex. 1.4 pg. 11 for how to draw dotplot, see pg. 12 and 25 for how to describe distribution)

p. 17 #9 (see ex. 1.5 pg. 13 for how to read a stemplot – figure 1.6 that is referred to is on pg. 18)

p. 18 #11 (see ex. 1.5 pg. 13 for how to draw a stemplot and figure 1.4 how to split the stems)

p. 26 #16, 17, 18 (see pg. 25 and ex.1.7)

p. 40 #31 (a, b only), 33, 34, 35 (see pg. 37-40 for definitions and examples)

ASSIGNMENT – PART II: Reading and Writing about Statistical Concepts

The student will be expected to **READ** the AP Statistics textbook and interpret the answer to problems by **WRITING** complete sentences. It is important to read for understanding and write clear and concise sentences. These are skills that will help students succeed in the AP Statistics course and on the exam.

The student will read the online article from the Washington Post "Overstating Aspirin's Role in Breast Cancer Prevention" and then answer the questions below. (Hint: Type the article in **quotes** in the 'search window' of your computer and it will direct you to the Washington Post and this article)

1. What was the story that the newspapers wrote after the research was published by the Journal of the American Medical Association?

2. What other information needed to be added to the story so that people could make decisions for themselves about the use of aspirin to prevent Breast cancer?

3. How was the data collected to perform this study?

4. What kind of study was performed?

5. Can this type of study be used to prove the aspirin prevents breast cancer?

6. What kind of study must be done in order to 'prove' something?

7. What is the difference between 'cause' and 'association'?

8. You may have heard the statement "you can prove anything with statistics". Using what you have learned reading this article, explain what You think is meant by this statement.

Please bring the packet with you to AP Statistics class on the first day of school