

Due 8/18/22

AP Statistics Summer Assignment: 2022-2023 School Year

Hello, future statisticians! I look forward to a fantastic year with you next year. To prepare yourself for AP Statistics, please complete the following items:

- Purchase the book for the course:
The Practice of Statistics (for AP*)
Daren S. Starnes, Dan Yates, David S. Moore
4th ed.
W.H. Freeman and Company
ISBN-13: 978-1429245593
Used less than \$30 on Amazon (or very cheap at local used bookstores)
- Complete a summary page that you may use on a test on Chapter 1 during the first ten days of the year. While we will spend some time in class on these items before the Chapter 1 test, you will want to make sure you know most items on the list below before school starts. You will find it helpful if your summary page has the terms to know and "other things to look at" on it that are listed below. You only get one sheet of paper for your summary! (Hint: you will have to read Chapter 1 of your Statistics textbook).
- Complete Sets #1, #2, and #3 of homework (see next page). We will discuss the problems in class. You may find it helpful to try the examples in the section and related odd problems before you attempt the even ones.

Analyzing Categorical Data (S1.1), Displaying Quantitative Data with Graphs (S1.2), Describing Quantitative Data with Numbers (S1.3)

- Read p. 3 – p. 6, p. 8 – p. 21, p. 27 – p. 41, p. 50 – 68
- Terms to know:
 - Individuals
 - Variables
 - Categorical Variable
 - Quantitative Variable
 - Distribution
 - Frequency Table
 - Pie Chart
 - Bar graph
 - Two-way table
 - Marginal distribution
 - Conditional distribution
 - Segmented Bar Graph
 - Association
 - Dotplots
 - Shape
 - Center
 - Spread
 - Outliers
 - symmetric distribution
 - skewed to the right
 - skewed to the left
 - unimodal
 - bimodal
 - stemplot
 - histogram
 - mean
 - median
 - first quartile Q1
 - third quartile Q3
 - interquartile range (IQR)
 - 1.5 X IQR Rule
 - The Five-Number Summary
 - Standard deviation
 - variance

Other things to look at (and perhaps include on your summary page):

- “How to organize a statistical problem” (p. 18)
- “How to examine the distribution of a quantitative variable (or ‘SOCS’)” (p. 28)
- “Using Histograms Wisely” (p. 39)
- “Comparing the Mean and Median” (p. 54)
- “How to Calculate the Quartiles Q1 and Q3 and the Interquartile Range” (p. 56)
- “How to Make a Boxplot” (p. 59)
- “How to Find the Standard Deviation” (p. 64)
- “Choosing Measures of Center and Spread” (p. 66)

Problems that are due in the first week of class. Note that I have assigned both odd and even problems. Since the answers the odd problems are in the back of the book, please use those answers as a way to help you understand how to do the even problems.

Set #1: Starnes p. 7 #1 – 4; p 23 #12 – 18, 23, 24 (all)

Set #2: Starnes p. 43 #37 – 40, 43 – 52 (all)

Set #3: Starnes p. 70 #79 – 84, 88 – 96 (all)