Homework Assignment For Week #1

Reading Assignment

Read the following sections of your textbook this week:

Section 2.2, Section 2.3, Section 2.4

Practice Problems

Do as many of the following problems as you can to practice for the homework quiz on Monday, January 8. You may use your solutions to these problems as notes while taking the quiz. (You may not use your textbook during the quiz.)

Section 2.2, # 1, 4, 7, 9, 10, 11, 13-20, 22, 23, 26, 29, 32, 36, 37, 38, 39-42, 45, 48, 49, 50, 55, 57, 58, 61, 67-70, 76

Section 2.3, # 3, 5, 8, 11, 13, 14, 16, 22, 23, 25, 26, 29, 30, 33, 36, 38, 44, 47, 49, 50, 53, 56, 58, 64

Section 2.4, # 1, 4, 6, 9, 12, 15, 17, 19, 20, 22, 23, 26, 27, 29, 31, 32, 33, 35

Regressions on TI-82/83 Calculators

Graphing calculators are programmed with an algorithm that allows them to “fit” a function to a table of data. These are called “regression algorithms.” For example, a Linear Regression fits a linear function to the data points (this is sometimes called a “line of best fit”); a Quadratic Regression fits a quadratic function to the data. There are also Cubic, Quartic and other regressions. Below are instructions for using a TI-82/83 to find a Linear Regression.

- Enter Data: press the \textbf{STAT} button. Under this menu, select Edit by pressing \textbf{ENTER} or \textbf{1}. Enter your independent-variable data under the list named \textit{L1}, and enter your dependent-variable data under the list named \textit{L2}. (You can clear a list by highlighting it’s name with the cursor, then pressing \textbf{CLEAR} and \textbf{ENTER}.)

- Find the Coefficients for the Regression Line: Press \textbf{STAT}, move the cursor right to the \textbf{CALC} menu, and move the cursor down to highlight \textbf{4. LinReg}, then press \textbf{ENTER}. Then press \textit{L1} (the key combination for this is \textbf{2nd} and \textbf{1}), then press the comma key (just above the \textbf{7}), then enter \textit{L2} (key combination: \textbf{2nd} and \textbf{2}). Then press \textbf{ENTER}.

This give you coefficients for the linear function that best fits the data you entered. You can select options other than \textbf{5. LinReg} to obtain other types of regressions.