MATH 21-01 (Introductory Statistics), HW1 (100 points). Due: 09/13/2016 in class.

Not from textbook (50 / 100 pts)

Note: Please prepare this part of the homework on the computer. Please supply both the R commands you used and the requested plots as part of your homework.
Download and install the R package. See notes on class website. Some helpful links: http://www.harding.edu/fmccown/r/, http://www.statmethods.net/input/contents.html, http://www.r-tutor.com/r-introduction/data-frame/data-import.

Get stock prices for the past year of SCTY (solar city corp stock). To do so, go to http://finance.yahoo.com/quote/SCTY/. Click on Historical Data.
Select time period: 9/4/2015 to 9/4/2016. Make sure to use these dates. Click on download data. This will allow you to download a file called table.csv.

- (a, 5 pts) Load the data into R (hint, use command mydata = read.csv("table.csv"))
- (b, 5 pts) Print the names of the data columns (hint, use command names(mydata))
- (c, 5 pts) How many data rows are there? Why less than 365?
- (d, 5 pts) Use the plot command to make a plot of the high (hint,mydata$High) and low prices (hint, mydata$Low) versus the date. Label both axes. Prices should be on the vertical axis.
- (e, 10 pts) Make bar plots and histograms of High and Low prices. Label both axes. Say a few words about each plot.
- (f, 5 pts) When (on which date) was the highest price of the year? The lowest?(Hint, you may make use of the min and max commands in R).
- (g, 10 pts) Compute the spread between low and high prices
  (hint, compute (mydata$High - mydata$Low)) and plot a bar plot of the spread against the date. Label the axes.
- (h, 5 pts) When (on which date) was the daily spread highest and lowest?

From textbook (50 / 100 points)

You are free to handwrite or type this part but make sure you attach your answers to the first part of the homework (only hand in one document with your name on it). Please clearly state your answer to each problem.

- Section 1-2: 1,2,3,5,8-10,17-19
- Section 1-3: 5,6,8,10,15-17,24
- Section 1-4: 1,3
- Section 2-2: 10,22,24,29,31