Stat 185 - In class problems
Wednesday, November 8

1. I've got two CSV files on my webspace that you can read into R as follows:

   ```
   df1 = read.csv("http://www.marksmath.org/data/book_prices_arts.csv")
   df2 = read.csv("http://www.marksmath.org/data/book_prices_sciences.csv")
   ```

   (a) Use the `head` or `tail` command to examine the first few rows of these data files. Can you conjecture what these files contain?

   (b) Use the `t.test` command to examine whether the Amazon price of one of these classes of books is, on average, different from the other.

   Note: Don't forget that we did something similar when we compared race times between older and younger runners.

2. In a sample of 12 Republicans, 8 were for issue 1 and 4 against. In a sample of 19 Democrats, 7 were for issue 1 and 12 against. Let's use this data to explore whether there is a genuine difference in the views of Democrats and Republicans on issue 1 to a 95% level of confidence.

   (a) Compute the observed proportions $\hat{p}_R$ and $\hat{p}_D$, as well as the difference

   $$\hat{p} = \hat{p}_D - \hat{p}_R.$$

   (b) Compute the standard error.

   (c) Compute the test statistic.

   (d) Use a command that looks something like `2*pt(-1.2,3)` to compute the p-value.

   (e) State the conclusion of the test.

   Note: You can find relevant formulae in our class notes on relating data sets and it might be convenient to do the computations on the computer!