For all questions, please submit your R code, and a doc file with a copy of the screen output and plots (where applicable) to [smtowers@asu.edu](mailto:smtowers@asu.edu).

The code in your R files should exhibit all of the good coding practices mentioned in <http://sherrytowers.com/2012/12/14/good-programming-practices-in-any-language/>

All plots should exhibit all of the good practices in creating figures, mentioned in

<http://sherrytowers.com/2013/01/04/good-practices-in-producing-plots/>

Please submit your files in a format hwk1\_<first name>\_<initial of last name>.R and hwk1\_<first name>\_<initial of last name>.doc

**Question 1)**

Create a vector myarray with the following numbers in the given order:

54, 49, 25, 38, 43, 22, 47, 97, 49, 62, 97, 50, 62

Suppose that we originally forgot to type a value 98 into the vector, between the values 22 and 47. Read the R help file for the append() command. Find a way to insert this value into the vector, between the 22 and 47, using the append() command.

**Question 2)**

Solve question 1), but this time use the R combine function, c()

**Question 3)**

Read in the file [www.sherrytowers.com/influenza\_summary\_ny\_nj.txt](http://www.sherrytowers.com/influenza_summary_by_region.txt) to a data frame.

The file contains the CDC confirmed influenza cases by week for each influenza season from 2006-07 to 2012-13 in NY and NJ, and for three influenza subtypes, B, AH3N2, and AH1N1

The “year” field contains the maximum of the year for each season, thus “year” for the 2006-07 season is 2007.

The field “day\_relative\_to\_janfirst” contains the date, expressed in days relative to Jan 1st of each season.

Loop over the years, and select the data corresponding to each year. Plot the influenza AH1, AH3, and B weekly incidence for each year:

Divide the plotting area up into 4 regions. In the first region you will plot the AH1N1, in the next AH3N2, and in the third B. In the fourth plotting region you will put a legend to show the different colored lines for each year. Note that to make a blank plot over which you can overlay a legend use

plot(1, type="n", axes=F, xlab="", ylab="")

Your plot should look like this:



Subset the dataframe, selecting the 2012-13. Using Google, look up how to remove a column from a data frame; remove the fluB column. Then read the R help on the write.table(). Output this subset of the data frame to a file. Open the file in an editor, and copy and paste the contents of the file into the doc file containing your homework solutions.