Spring 2003 (Newton) 15.075 Applied Statistics

Homework # 2 assigned 10 February 2003, due 18 February 2003

Read Chapter 4 in the text. Then do the following problems. Please use a word processor to type up your solutions.

Use the *import data* option under *file* on the menu to import ascii or excel files into S-plus. The resulting S-Plus data frame will have the same name as the original file. You can refer to the columns of the data frames in a number of ways. For instance, for Ex4.36, the third column is Ex4.36[,3], Ex4.36[,"Unemp"], or Ex4.36$Unemp. The column names (more generally, dimnames) in S-Plus are case-sensitive.

You will find the S-Plus functions **plot, boxplot, qqplot, hist, quantile, mean, var** and **cor** useful for some of the exercises. To plot a vector, **x**, vs. observation number, you can just say **plot(x).**

For all exercises involving example data sets, plot the data in various ways. Comment on what the plots tell you about the data. Copy and paste the plots into your solutions.

1. 4.12 Plots!
2. 4.16 Plots!
3. 4.22 Just say **boxplot(Ex4.22)** and you will get side-by-side plots. Make other plots as well.
4. 4.26 Use **qqnorm** and **qqline** or write your own function! Make other plots as well.
5. 4.30
6. 4.36 Plots!
7. 4.40
8. 4.42 Just plot Sales vs. observation number. Then connect the dots with the **lines** function. Comment on the results.
9. 4.50 Plots!