

Chapter 7, problems 7.2-2ac, 7.2-8, 7.2-10, 7.3-12, 7.3-6*, 7.4-2, 7.4-8, 7.5-2, 7-5.10a, 7.5-12.

The starred problems are for extra credit. Each problem is graded on the base of “4 points max”.

The first additional assignment for 586 students (due by the final exam):

7.1-5c, 7.1-22b, 9.1-1ab, 9.6-4c.

Some practical hints for doing computer projects with MATLAB:

1. You can save your project to a floppy disk, so you can come back to the computer lab and resume an unfinished project at a later time.
2. Some simple commands can be just typed and executed. For example, **X=randn(10,1)** produces a 10×1 vector of random normal numbers, and then **m=mean(X)** computes the sample mean. However, when you need to repeat a certain experiment N times (such as $N = 1000$ or 10000), then you'll need to make an m-file. It is a text file on your floppy disk that contains a MATLAB code making a loop that runs over N times. If you have a correctly written m-file, then you simply open the MATLAB window on the desktop and type a command that uses the name of the file, it will be then executed.

To code a loop you'll only need a few (5-10) lines, and the MATLAB language is pretty simple. I have posted a sample MATLAB file **means.m** on my web page, you can download it. The file contains a small program that simulates n values of a normal random variable, finds their sample mean, and then repeats this experiment m times. To use it, you can type, for example, **X=means(10,100)**, then you get 10 sample means, each computed from a sample of size 100 from a normal random variable. The file has detailed comments that will help you to adapt it for your own project.