**Matlab Practice Exercises for Tues. Jan 29**

**I’ll ask for volunteers to show us their results in class (hard copy or on your laptop with the projector)**

1. First, you might use the Matlab commands “help” and “doc” to get information on **save**, **load**, and **diary**. Also use the help command to investigate the following graphics commands. For example, at the prompt >>help save >>doc diary >>doc mesh, etc . Illustrate all the Matlab graphics commands and functions with nontrivial examples (not just the examples provided in the Matlab help files). You can use results from #2 below.

**plot, plot3, fplot, subplot, view, hold**

**mesh, meshc, meshz**

**surf, surfc,**

**contour, contourf, contour3**

**You can simplify your work by using: ezcontour, ezcontourf, ezmesh, ezmeshc, ezplot3, ezsurf, ezsurfc, ezplot, vectorize, function\_handle**

2. Specific Matlab Graphics Experiments. In each of the problems, give the graph a title, label the x-axis, the y-axis, and label the curves plotted, using appropriate Matlab commands.

(a) Using the 2D command **plot**, graph the circle x2 + y2 = 4. (hint, solve for y, plot two functions on the same graph using the hold command.

(b) Using the 2D command **fplot**, graph both the following curves x2 + y = 11 and

x + y2 = 7 on the **same** graph. You might also use function m-files.

(c) Use **plot3** to plot the following functions of **t** on the **same** graph, where:

t = -4:.01:4, x = cos(t), y = sin(2t), z = t2.

(d) Use the **mesh**, **surf**, and **contour** commands to form plots the following function

in the region [-3, 3] X [-3, 3]. (**Not** on same graph, that is, use 3 graphs).

z = f(x,y) = cos(x + y) + e-(x2 + y2).