

Assignment 6

The purpose of this assignment is to familiarize the student with the basics of plotting. The ultimate goal is to have the student comfortable with plotting in MATLAB.

General Instructions: You will be submitting this assignment under one .m file.

0.1 Plot

This section will be using the plot function. On your first plot, plot a random 1 by 50 that sorted from high to low. Let your X variable be the random numbers all multiplied by 100 and your Y variable to be equal to X^2 . Give it a title, a label for both x and y-axis, a grid, a minor grid. For the x-axis, label it α . For the y-axis, label it X^2 . For the title label it "These are words" in italics and bold. On the same plot, plot another $Y2 = X^3$. Now add a legend labeling the first equation as "Y" and the second "Y2". On another plot, plot $Y3 = X^4$. Give the second plot the same title, axis label, and grids as the first plot.

0.2 Subplotting

Just another way of plotting! Research the subplot() function for MATLAB. Start a third figure. I would like you to create a 1 by 3 plot. That is, 3 separate plots that lie in the same row. Use the information from section 0.1; This includes giving it the same labels, titles, legends, and grids if applicable. On the first plot, plot figure 1. On the second plot, plot Y2, on the third plot, plot Y3.

Notes: Recognize why we need to separate data and plot it on various graphs. The whole point of graphing is to visually communicate information with absolute clarity. In this case, notice how the plots being plotted are on significantly different magnitudes of order. If they were to be plotted on the same graph, for example, Y would be too miniscule to visualize compared to something of the 25th power.