ENGR 231 – Linear Engineering Systems

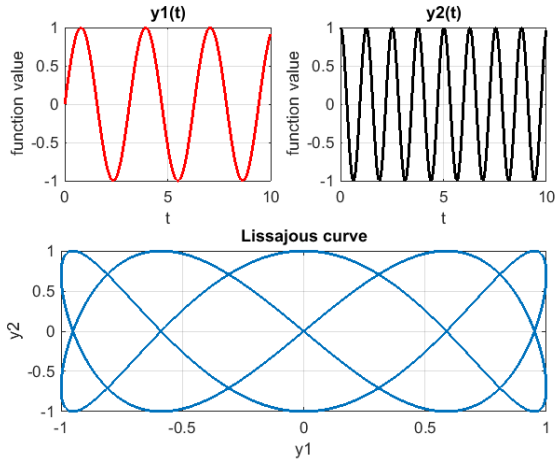
Lab 1: In Class Assignment Spring 2017

Perform the following tasks (label cells as task numbers). Note the first cell (unnumbered) should be your Name, section number and the version of this Assignment. Tasks follow:

1. Create a time array called t, whose values range from 0 to 6 in steps of 0.01. Do not print out the intermediate values.

2. Create the following outputs using proper Matlab syntax
   y1 = sine of 2t, y2 = cosine of 5t

3. Using subplot, plot: y1(t) vs t, y2(t) vs t and y2(t) vs y1(t). You should be able to get a plot similar to that shown below:



Some hints (title, xlabel, ylabel, plot(xx,xx, 'color', 'linewidth', 2)

4. Using Wikipedia (source of all knowledge – some of which is incorrect and some which is incomprehensible) look up Lissajous Curve and write your own (do not cut and paste) interpretation of the plot y2 vs. y1.

5. Discuss what happens if you interchange y1 and y2? What happens if both of the arguments to the sine and cosine waves double?

Note: Submit a published pdf file of your script with convention **lastname_initials_lab1.m** The published document must include all functions used. All figures must be annotated (labels, legends, markers, title, etc. Answers to questions asked should be printed as an output.