

### Computational Homework 0, due January 21st

The purpose of this homework is to have you become familiar with the Matlab program.

Do the following tasks:

1. Click on Mozilla (Netscape) and go to the class webpage  
<http://www.math.ucla.edu/~navasca/151a.1.05w/compute.html>.
2. Download the following .m files: *fun1.m*, *fun2.m*, *plotfun.m*. Save the .m files in your local directory.
3. Click on Matlab. Specify the directory where the .m files are located (go to set path).
4. Produce and print the following graphs:
  - Plot  $f(x) = e^{-x^2}$  on the interval  $[-1, 1]$  using 16 points.
  - Plot  $f(x) = \cos^2 3x$  on the interval  $[-\pi, \pi]$  using 32 points.
  - On the same figure, plot  $f(x) = \cos^2 3x$  on the interval  $[-\pi, \pi]$  using 8 points, 16 points, and 64 points. Type *help plot* at the Matlab prompt to learn how to distinguish each plot.
  - Plot  $f(x) = 6 \cos 8x$  on  $[-2\pi, \pi]$ . Using a text editor (emacs, vi, Matlab editor, etc...) create a .m file just like *fun1.m* and *fun2.m*.