Top 10 Matlab Commands for Modeling and Simulation

1. help - Gives usage syntax and description of specified command
2. eig - Computes the eigenvalues and eigenvectors of a square matrix
3. roots - Determines the roots (i.e. zeros) of a polynomial
4. plot - Produces a linear plot, with a variety of options
5. det - Computes the determinant of a matrix
6. inv - Computes the inverse of a matrix
7. conv - Convolves (i.e. polynomial multiplication) two vectors
8. syms - Declares a symbolic variable to be used in symbolic manipulations
9. simulink - Starts the Simulink modeling package in MATLAB
10. stateflow - Starts the Stateflow library in Simulink

Useful Online Matlab References:

- http://www.cds.caltech.edu/~murray/notes/matlab-primer.ps
  This primer contains all you need to become proficient in the Matlab.

- http://www.engin.umich.edu/group/ctm/basic/basic.html
  This online tutorial provides a good introduction to Matlab, in addition to many examples and illustrations.

  This Mathworks web site has all the documentation regarding the different Matlab-related packages, as well as the different Toolboxes available.

  This Mathworks web site goes through detailed examples of intermediate and advanced features in the Matlab environment.

  This site examines the “predator-prey” model, and a simulation in MATLAB (as well as other math packages) can be found here.

  This site illustrates the modeling and simulation of the “mass-spring” example, and even describes a few control system topics in the process.