Appendix A. List of useful MATLAB functions

Here is a list of some useful MATLAB functions:

Function name	Purpose
`zeros`	Initialize a vector or matrix of 0's with specified dimensions.
`ones`	Initialize a vector or matrix of 1's with specified dimensions.
`eye`	Create an identity matrix with specified dimensions.
`length`	Get the number of components of a vector.
`size`	Get the number of elements in a specified dimension of a vector/matrix. Number of rows of a is `size(a,1)`, and number of columns of a is `size(a,2)`.
`sort`	Sort the elements in an array in ascending or descending order.
`transpose, or '`	Transpose a vector or matrix.
`inv, or \`	Compute the inverse of a matrix. When solving systems of linear equations, A*x=b, it is better (in terms of performance and numerical accuracy) to use the "backslash" operator, x=A\b.
`sum`	Get the sum of the components of a vector/matrix.
`prod`	Get the product of the components of a vector/matrix.
`sqrt`	Get the square root of a variable.
`exp`	Get the exponential of a variable.
`log`	Get the natural logarithm of a variable.
`sin, cos, tan`	Get the trigonometric functions of a variable (in radians).
`asin, acos, atan`	Get the inverse trigonometric functions of a variable (in radians).
`pi`	Retrieve the π number.

For more detailed information about the inputs/outputs and example uses of these functions simply write them in the MATLAB's command window or in any script, right-click on them and select "Help on Selection".