Cheatography

MATLAB Cheat Sheet

by Photony via cheatography.com/121981/cs/22507/

Fundamentals

Clear command window	`clc`
Clear all variables	`clear`
Clear specific variable	`clear <variable>`
Get standard documentation	`help <command>`
Get detailed documentation	`doc <command>`
One line comment	`% <Text>`
Print to command window	`fprintf('<Text>')`
Continue code on next line	`...` (Equivalent to space, don't split up 'Text')

Links for Further Information

Graphics object properties	https://www.mathworks.com/help/matlab/graphics-object-properties.html
Figure properties	https://www.mathworks.com/help/matlab/ref/matlab.ui.figure-properties.html
Line specification (LineSpec)	https://www.mathworks.com/help/matlab/ref/linespec.html
Line Properties	https://www.mathworks.com/help/matlab/ref/matlab.graphics.chart.primitive.line-properties.html
Axes Properties	https://www.mathworks.com/help/matlab/ref/matlab.graphics.axis.axes-properties.html

Mathematical Constants and Functions

π	`pi`
e	`exp(1)`
∞	`inf`
Exponential function	`exp(x)`
Square root	`sqrt(x)`
Sine	`sin(x)`
Cosine	`cos(x)`
Tangent	`tan(x)`

Operators

Addition	+
Subtraction	-
Multiplication	*
Division	/
Left division	\ (a\b = b/a)
Exponentiation	^

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Matrix and Vector Operations

Element-wise multiplication	`.*`
Element-wise division	`./`
Element-wise exponentiation	`.^`
Transpose	`.'`
Dot product	`dot(A,B, dim)`
Cross product	`cross(A, B, dim)`

Format Specifiers

Single character	`%c`
Decimal notation (signed)	`%d`
Decimal notation (unsigned)	`%u`
Exponential notation	`%e`
Fixed-point notation	`%f`
String or char array	`%s`

Creating and accessing Matrices and Vectors

Create m by n matrix filled with ones	`X = ones(m , n)`
Create m by n zero matrix	`X = zeros(m, n)`
Create m by n identity matrix	`X = eye(m, n)`
Create row vector	`X = [1 2 3]` or `X` = [1, 2, 3]
Create column vector	`X = [1; 2; 3]`
Create matrix	`X = [1, 2, 3; 4, 5, 6]`
Create a vector with consecutive numbers	`X = 1 : 5` (Start : End)
Create a vector with consecutive numbers in a specific interval	`X = 0 : 0.1 : 1` (Start : Interval : End)

Plotting

Plot values	`plot(X, Y)`
Plot values and set formatting	`plot(X, Y, LineSpec)`
Plot new values over old plot	`hold on` followed by a new `plot(X, Y)` command
Add plot title	`title('<Title>')`
Add plot legend	`legend('<Name for plotted data>')`
	For Multiple plots: Separate names with commas.
Add x-axis label	`xlabel('<Label>')`
Add y-axis label	`ylabel('<Label>')`
Rotate y-axis label to be horizontal	`ylabel('<Label>', 'Rotation', 0)`
Turn on grid	`grid on`
Add text to plot	text(<X position>, <Y position>, '<Text>')

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