

# Matlab command reference

## Mathematical commands

**abs** Absolute value  
**angle** Phase angle or complex argument  
**ceil** Round up to nearest integer values  
**conj** Complex conjugate  
**cos** Return cosine of input variable  
**conv** Convolution  
**cov** Covariance  
**det** Determinant of a matrix  
**eye** Identity matrix  
**max** Maximum value in an array  
**mean** Mean value of a given array  
**min** Minimum value in an array  
**mldivide** or **\** Left matrix divide  
**rand** Generate a random number  
**randn** Normally distributed **rand**  
**real** Real part of complex number  
**round** Round to nearest integer values  
**sin** Return sine of input variable  
**sign** Returns sign of variable  
**size** Return size of input variable  
**i** or **j**  $\sqrt{-1}$   
**imag** Imaginary part of complex number  
**inv** Matrix inverse  
**ones** Array of ones  
**pi** 3.141592654  
**pinv** Matrix pseudo-inverse  
**std** Standard deviation of a given array  
**tan** Return tangent of input variable  
**tril** Lower triangular part of a matrix  
**triu** Upper triangular part of a matrix  
**zeros** Zero matrix

## Plotting commands

**bar** Plot a bar chart  
**compass** Compass plot  
**grid** Show grid  
**gtext** Put text on the plot using mouse  
**hist** Plot a histogram  
**hold** Keep current plot  
**mesh** Mesh surface plot  
**plot** 2d plot function  
**plot3** 3d plot  
**stairs** Stairstep plot

**stem** Plot a “stem” plot  
**surf** 3d coloured surface plot  
**text** Put text on the plot  
**title** Plot title  
**xlabel** Label for the x axis  
**ylabel** Label for the y axis

## Programming commands

**&** Logical operator for “and”  
**|** Logical operator for “or”  
**<** Relational operator for “less than”  
**>=** “greater than or equal”  
**==** Relational operator for “equal”  
**clc** Clear command window  
**disp** Display input variable  
**end** End loop or conditional statement  
**for** Open a for loop  
**fprintf** Write data output to a file  
**get** Lists current attributes for an object  
**if, else, elseif** Conditional statements  
**input** Prompt user for input  
**num2str** Convert a number to a string  
**pause** Wait for user response or a set time  
**set** Change attributes related to object  
**while** Open a while loop

## Miscellaneous commands

**cd** Change directory  
**clear** Clear all variables  
**clock** Current date and time  
**date** Display current date  
**diary** Start recording a diary  
**dir** List all files in the directory  
**edit** Start the editor  
**eps** Floating point relative accuracy  
**format** Set output format for numbers  
**help** Display Matlab help for command  
**helpwin** Display the help window  
**load** Load file into Matlab workspace  
**lookfor** Lookfor commands or m-files  
**path** Get/set search path  
**quake** Loma Prieta Earthquake  
**quit** Exit from Matlab  
**save** Save workspace variables to disk  
**who** List current variables  
**whos** Long version of **who**