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| **Command** | **Description** |
| **abs** | Absolute value |
| **acker** | Compute the K matrix to place the poles of A-BK, see also place |
| **axis** | Set the scale of the current plot, see also plot, figure |
| **bode** | Draw the Bode plot, see also logspace, margin, nyquist1 |
| **c2d** | Continuous system to discrete system |
| **clf** | Clear figure |
| **conv** | Convolution (useful for multiplying polynomials), see also deconv |
| **ctrb** | The controllability matrix, see also obsv |
| **deconv** | Deconvolution and polynomial division, see also conv |
| **det** | Find the determinant of a matrix |
| **dlqr** | Linear-quadratic regulator design for discrete-time systems, see also lqr |
| **eig** | Compute the eigenvalues of a matrix |
| **eps** | MATLAB's numerical tolerance |
| **feedback** | Connect linear systems in a feedback loop |
| **figure** | Create a new figure or redefine the current figure, see also subplot, axis |
| **for** | For loop |
| **format** | Number format (significant digits, exponents) |
| **function** | Creates function m-files |
| **grid** | Draw the grid lines on the current plot |
| **gtext** | Add a piece of text to the current plot, see also text |
| **help** | Matlab help documentation |
| **hold** | Hold the current graph, see also figure |
| **if** | Conditionally execute statements |
| **imag** | Returns the imaginary part of a complex number, see also real |
| **impulse** | Impulse response of linear systems, see also step, lsim |
| **input** | Prompt for user input |
| **inv** | Find the inverse of a matrix |
| **legend** | Graph legend |
| **length** | Length of a vector, see also size |
| **linspace** | Returns a linearly spaced vector |
| **lnyquist** | Produce a Nyquist plot on a logarithmic scale, see also nyquist1 |
| **log** | Natural logarithm, also log10: common logarithm |
| **loglog** | Plot using log-log scale, also semilogx/semilogy |
| **logspace** | Returns a logarithmically spaced vector |
| **lqr** | Linear quadratic regulator design for continuous systems, see also dlqr |
| **lsim** | Simulate a linear system, see also step, impulse |
| **margin** | Returns the gain margin, phase margin, and crossover frequencies, see also bode |
| **minreal** | Produces a minimal realization of a system (forces pole/zero cancellations) |
| **norm** | Norm of a vector |
| **nyquist1** | Draw the Nyquist plot, see also lnyquist. Note this command was written to replace the MATLAB standard command nyquist to get more accurate Nyquist plots. |
| **obsv** | The observability matrix, see also ctrb |
| **ones** | Returns a vector or matrix of ones, see also zeros |
| **place** | Compute the K matrix to place the poles of A-BK, see also acker |
| **plot** | Draw a plot, see also figure, axis, subplot. |
| **poly** | Returns the characteristic polynomial |
| **polyval** | Polynomial evaluation |
| **print** | Print the current plot (to a printer or postscript file) |
| **pzmap** | Pole-zero map of linear systems |
| **rank** | Find the number of linearly independent rows or columns of a matrix |
| **real** | Returns the real part of a complex number, see also imag |
| **rlocfind** | Find the value of k and the poles at the selected point |
| **rlocus** | Draw the root locus |
| **roots** | Find the roots of a polynomial |
| **rscale** | Find the scale factor for a full-state feedback system |
| **set** | Set(gca,'Xtick',xticks,'Ytick',yticks) to control the number and spacing of tick marks on the axes |
| **sgrid** | Generate grid lines of constant damping ratio (zeta) and natural frequency (Wn), see also sigrid, zgrid |
| **size** | Gives the dimension of a vector or matrix, see also length |
| **sqrt** | Square root |
| **ss** | Create state-space models or convert LTI model to state space, see also tf |
| **ssdata** | Access to state-space data. See also tfdata |
| **stairs** | Stairstep plot for discrete response |
| **step** | Plot the step response, see also impulse, lsim |
| **subplot** | Divide the plot window up into pieces, see also plot, figure |
| **text** | Add a piece of text to the current plot, see also title, xlabel, ylabel, gtext |
| **tf** | Creation of transfer functions or conversion to transfer function, see also ss |
| **tfdata** | Access to transfer function data, see also ssdata |
| **title** | Add a title to the current plot |
| **wbw** | Returns the bandwidth frequency given the damping ratio and the rise or settling time. |
| **xlabel/ylabel** | Add a label to the horizontal/vertical axis of the current plot, see also title, text, gtext |
| **zeros** | Returns a vector or matrix of zeros |
| **zgrid** | Generates grid lines of constant damping ratio (zeta) and natural frequency (Wn), see also sgrid, sigrid |