Gnuplot for plotting

The program `gnuplot` allows you to plot functions and data:
Running gnuplot

Most options for running gnuplot are invoked from inside gnuplot’s shell, so just

% gnuplot

is enough to get you started.
The basic plotting commands

☞ plot → operates either in rectangular or polar/parametric coordinates

☞ splot → lets you plot surfaces and contours

☞ replot → lets you redo a plot, such as when you change devices
Plotting functions

The basic command to plot a function of one variable is

`gnuplot> plot f(x)`
Functions

where $f(x)$ can be user defined or any of the standard math library functions:

- abs
- acos
- acosh
- arg
- atan
- atan2
- besj0
- besj1
- besy0
- besy1
- ceil
- column
- cos
- cosh
- erf
- erfc
- exp
- floor
- gamma
- igamma
- imag
- int
- ibeta
- inverf
- invnorm
- lgamma
- log
- log10
- log10
- norm
- rand
- real
- sgn
- sin
- sinh
- sqrt
- tan
- tanh
Examples of a simple function

gnuplot> f(x) = 5 + (-6 + 7*x) \times x

gnuplot> plot f(x)
Example of surfaces and contours
Example of surfaces and contours

gnuplot> set parametric  # so we can specify u and v
gnuplot> set hidden3d   # nice looking mode
gnuplot> set contour base  # draw a base projection also
gnuplot> set isosamples 50,50  # lots of sampling
gnuplot> splot u,v,sin(u)+cos(v)  # make the plot