

# gnuplot Cheat Sheet

## General remarks

`f(x,y)=x**y*cosh(x+y)`

`exit`

`^C`

`re[plot]`

`save "file"`

Define  $f(x) = x^y \cdot \cosh(x+y)$

Exit gnuplot

Abort a running calculation.

Plot a previous plot with changed parameters.

Save session to *file*

## Setup

`set terminal wxt`

`set terminal postscript eps`

`enhanced color solid rounded`

`set output "file"`

`set {x,y,z}label "x"`

`set title "x"`

`set datafile separator "x"`

`set {x,y,z,u,v,t}range [-A':A]`

`set format x "%.1P pi"`

`set xtics`

`(-pi,-0.5*pi,0,0.5*pi,pi)`

`set grid`

`set key {below,above,inside,  
outside} t[itle] "t"`

Reset terminal to standard X11.

Set terminal to use PS output.

Write output to *file*.

Define  $\{x,y,z\}$  the axis labels as  $x$ .

Define the title as  $x$ .

Define the column separator in datafiles.  
`\t` etc. may be used. Default is `\w`.

Set  $\{x,y,z\}$  (std. coordinates) or  $\{u,v,t\}$  (parametric) range from  $-A'$  to  $A$ .

Set format of  $x$  axis to multiples of  $\pi$  with one decimal place.

Set tics at specified places. Use with previous line.

Enables a grid.

Place key in specified location and place  $t$  above it.

## 2-D Plotting

`plot "file" u[sing] ($0*10):1`

`plot [-x':x] [-y':y] f(x)`

`plot "file" i[ndex] "x" t[itle]  
"y"`

`set samples`

`set label y "x" at A,B`

`unset label y`

Plot data in *file* with line numbers multiplied by ten as  $x$  axis and column 1 as  $y$  values.

Plot  $f(x)$  between  $-x', x$  in the  $-y', y$  range.

Plot lines in *file* following a line with content  $\#x$  and to be marked as  $y$ .

Set sampling rate for curves/2-D functions. Values  $> 500$  produce good results.

Write  $x$  at position  $(A,B)$ , tag as  $y \in \mathbb{N}$ .

Remove label  $y \in \mathbb{N}$ .

## 3-D Plotting

`splot [-x':x] [-y':y] [-z':z]  
f(x,y)`

`set hidden3d`

`set pm3d`

`set contour`

`set isosamples n,n`

`set view A, B, C, D`

`set parametric;`

`splot f(u,v),g(u,v),h(u,v)`

Plot  $f(x,y)$  between  $-x', -y', x, y$  in the  $-z', z$  range.

Don't show hidden lines.

Draw planes and colour them.

Draw level curves in the  $x-y$  plane.

Set sampling rate. Use 50 for previews and 100-300 for compiles.

Set view parameters. Read from bottom line in `wxt` terminal to set for PS output.

Plot a parametric surface. Use  $\partial_v \{f, g, h\} = 0$  for curves.