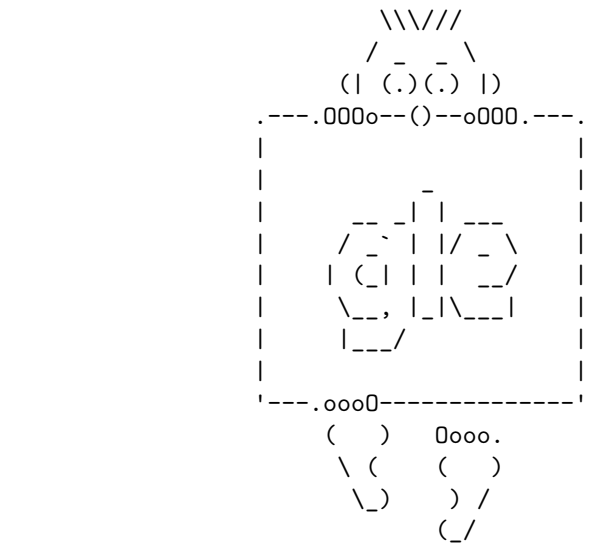


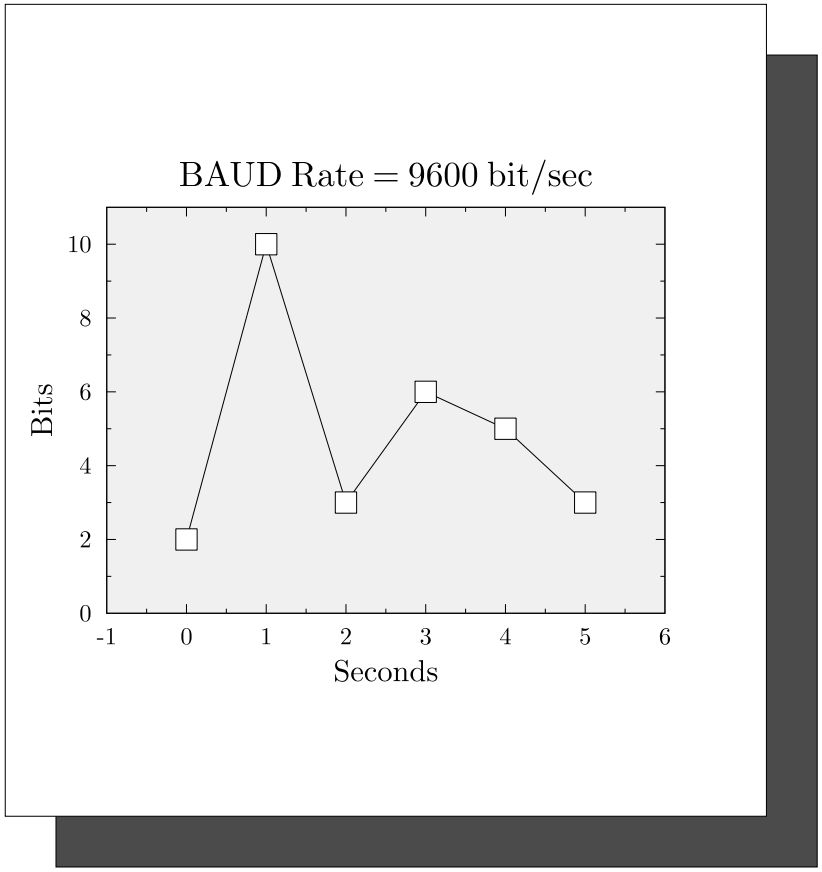
```
Codeblock class: gle

    sudo apt-get install gle-graphics
    http://glx.sourceforge.net

    runs:
    > gle {im_opt} -verbosity 0 -output <fname>.{im_fmt} <fname>.gle

    class->cmd
      gle -> gle

Metadata options
    imagine.im_out: img,fcb
    imagine.im_log: 4
    imagine.gle.im_fmt: svg
```

Notes:

- dat-files are relative to the input file in `im_dir`-images subdir
- metadata used sets gle's default output format to "svg"

GLE

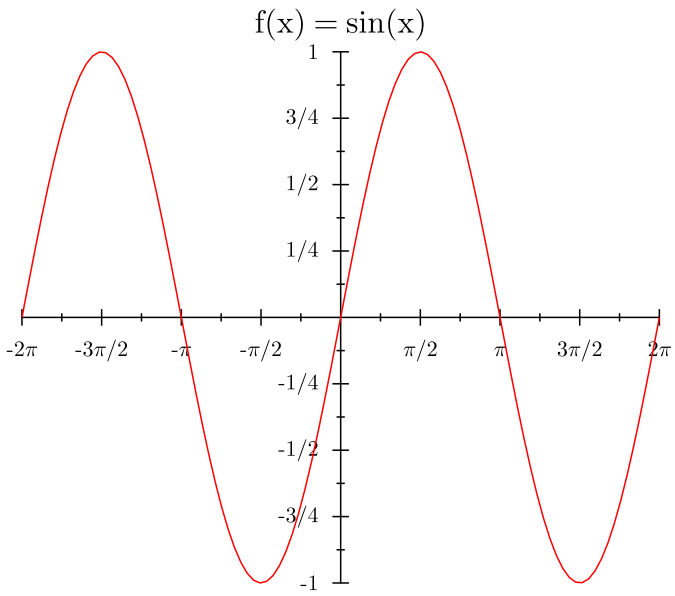
Baudrate




```gle
size 18 19

amove 2 1
box 15 16 fill gray60
rmove -1 1
box 15 16 fill white
rmove 2 4
box 11 8 fill gray5
```

```
set font texcmr hei 0.6

begin graph
    fullsize
    size 11 8
    title "BAUD Rate = 9600 bit/sec"
    xtitle "Seconds"
    ytitle "Bits"
    data "../dta/test.dat"
    d1 line marker wsquare
    xaxis min -1 max 6
    yaxis min 0 max 11
end graph
```

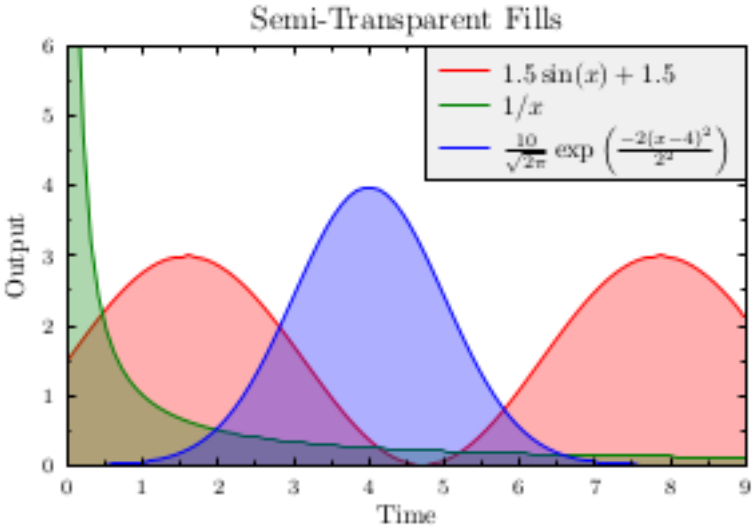
simple 2D




```gle
size 12 10

set font texcmr
begin graph
   math
   title "f(x) = sin(x)"
   xaxis min -2*pi max 2*pi ftick -2*pi dticks pi/2 format "pi"
   yaxis dticks 0.25 format "frac"
   let d1 = sin(x)
   d1 line color red
end graph
```

Semi-transparant fills

Needs the `-cairo` option and cannot be in svg-format.

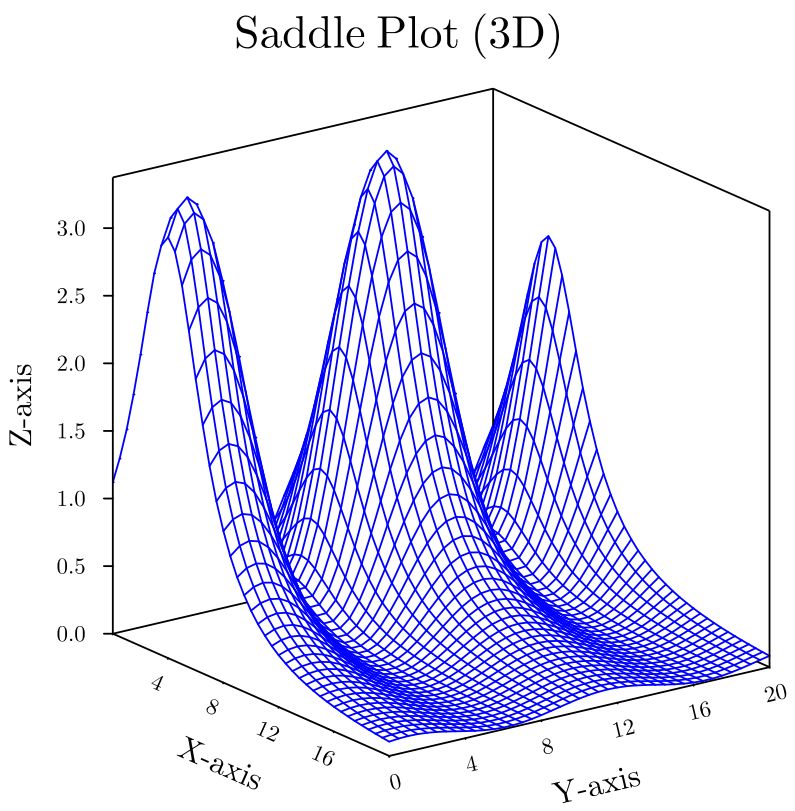



```{.gle im_opt="-cairo" im_fmt="png"}
size 10 7

set texlabels 1

begin graph
   scale auto
   title  "Semi-Transparent Fills"
   xtitle "Time"
   ytitle "Output"
   xaxis min 0 max 9
   yaxis min 0 max 6 dticks 1
   let d1 = sin(x)*1.5+1.5 from 0 to 10
   let d2 = 1/x from 0.01 to 10
   let d3 = 10*(1/sqrt(2*pi))*exp(-2*(sqr(x-4)/sqr(2))) from 0 to 10
   key background gray5
   begin layer 300
      fill x1,d1 color rgba255(255,0,0,80)
      d1 line color red key "$1.5\sin(x)+1.5$"
   end layer
   begin layer 301
      fill x1,d2 color rgba255(0,128,0,80)
      d2 line color green key "$1/x$"
   end layer
```

```
   begin layer 302
      fill x1,d3 color rgba255(0,0,255,80)
      d3 line color blue key "$\frac{10}{\sqrt{2\pi}}\exp\left(\frac{-2(x-4)^2}{2^2}\right)$
   end layer
end graph
```

saddle up

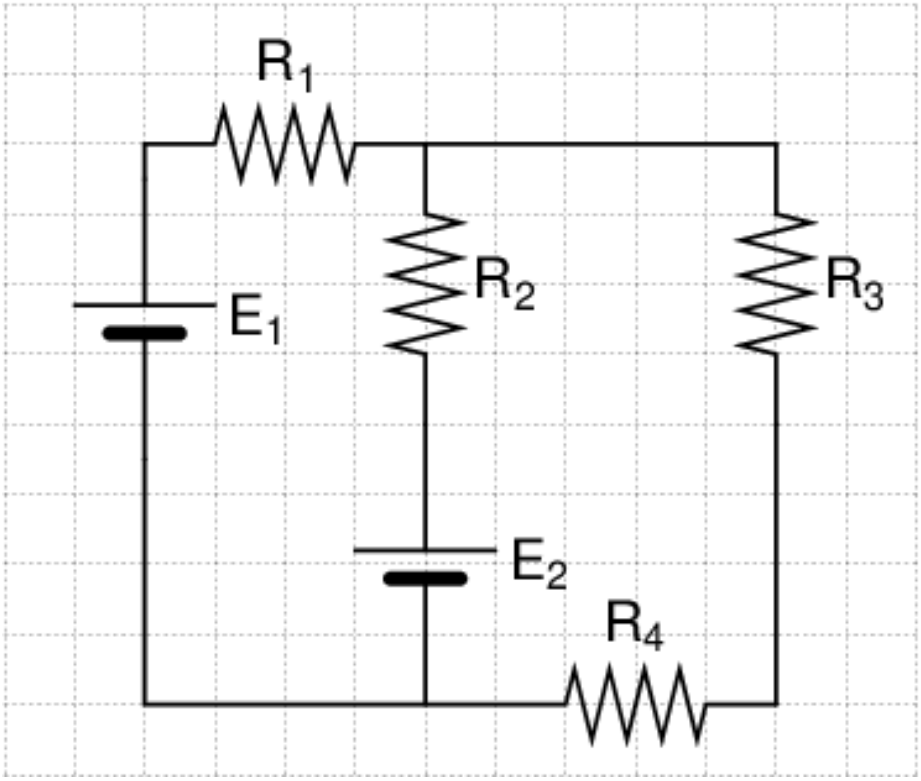
The following GLE script creates saddle.dta, which we want to be put in the dta directory so the file name is given relative to the pd-images directory.




```gle
size 10 9

set font texcmr hei 0.5 just tc

begin letz
   data "../dta/saddle.z"
   z = 3/2*(cos(3/5*(y-1))+5/4)/(1+(((x-4)/3)^2))
   x from 0 to 20 step 0.5
   y from 0 to 20 step 0.5
end letz

amove pagewidth()/2 pageheight()-0.1
write "Saddle Plot (3D)"
```

```
begin object saddle
   begin surface
      size 10 9
      data "../dta/saddle.z"
      xtitle "X-axis" hei 0.35 dist 0.7
      ytitle "Y-axis" hei 0.35 dist 0.7
      ztitle "Z-axis" hei 0.35 dist 0.9
      top color blue
      zaxis ticklen 0.1 min 0 hei 0.25
      xaxis hei 0.25 dticks 4 nolast nofirst
      yaxis hei 0.25 dticks 4
   end surface
end object

amove pagewidth()/2 0.2
draw "saddle.bc"
```

An electronic circuit




```{.gle im_fmt="png"}
! An H-Bridge

size 13 11
include "electronics.gle"

set lwidth 0.05 cap round font psh

! Draw a grid if the line below is uncommented
drawgrid 1

! Top left of diagram
amove 2.0 9.0

! Battery leg
gsave
rline 0 -0.5
cell_v "E_1"
rline 0 -3.5
```

```
rline 5 0
rresistor_h R_4
grestore

rresistor_h R_1

gsave
rresistor_v R_2
cell_v "E_2"
grestore
rline 5 0
rresistor_v R_3
rline 0 -4
```

Documentation

gle –help

```
GLE version 4.2.5
Usage: gle [options] filename.gle
More information: gle -help

Options:
 -help           Shows help about command line options
 -info           Outputs software version, build date, GLE_TOP, GLE_BIN, etc.
 -verbosity      Sets the verbosity level of GLE console output
 -device         Selects output device(s)
 -cairo          Use cairo output device
 -resolution     Sets the resolution for bitmap and PDF output
 -fullpage       Selects full page output
 -landscape      Selects full page landscape output
 -output         Specifies the name of the output file
 -nosave         Don't write output file to disk (dry-run)
 -preview        Previews the output with QGLE
 -version        Selects a GLE version to run
 -compatibility  Selects a GLE compatibility mode
 -calc           Runs GLE in "calculator" mode
 -catcsv         Pretty print a CSV file to standard output
 -tex            Indicates that the script includes LaTeX expressions
 -inc            Creates an .inc file with LaTeX code
 -texincprefix   Adds the given subdirectory to the path in the .inc file
 -mkinittex      Creates "inittex.ini" from "init.tex"
 -finddeps       Automatically finds dependencies
 -nocolor        Forces grayscale output
 -inverse        Render black as white for using on dark backgrounds
 -transparent    Creates transparent output (with -d png)
 -noctrl-d       Excludes CTRL-D from the PostScript output
 -nomaxpath      Disables the upper-bound on the drawing path complexity
 -noligatures    Disable the use of ligatures for 'fl' and 'fi'
 -gsoptions      Specify additional options for GhostScript
 -safemode       Disables reading/writing to the file system
 -allowread      Allows reading from the given path
 -allowwrite     Allows writing to the given path
 -keep           Don't delete temporary files

Show expert options: -help expert
Give more help about a given option: -help option
```

man page

```
GLE(1)                          User Manuals                          GLE(1)

NAME
       gle - Graphics Layout Engine

SYNOPSIS
       gle [options] file.gle ...

DESCRIPTION
       GLE (Graphics Layout Engine) is a graphics scripting language
       designed for creating publication quality graphs, plots, diagrams,
       figures and slides. GLE supports various graph types (function
       plots, histograms, bar graphs, scatter plots, contour lines, color
       maps, surface plots, ...) through a simple but flexible set of
       graphing commands. More complex output can be created by relying
       on GLE's scripting language, which is full featured with subrou-
       tines, variables, and logic control. GLE relies on LaTeX for text
       output and supports mathematical formulea in graphs and figures.
       GLE's output formats include EPS, PS, PDF, JPEG, and PNG.

DOCUMENTATION
       GLE's documentation is distrubuted in PDF format and can be found
       at the GLE website:

       <http://www.gle-graphics.org>

OPTIONS
       -help  Shows help about command line options.

       -info  Outputs software version, build date, GLE_TOP, GLE_BIN,
              etc..

       -verbosity
              Sets the verbosity level of GLE console output.

       -device
              Selects output device(s).

       -cairo Use cairo output device.

       -resolution
              Sets the resolution for bitmap and PDF output.
```

```
-fullpage
       Selects full page output.

-landscape
       Selects full page landscape output.

-output
       Specifies the name of the output file.

-nosave
       Don't write output file to disk (dry-run).

-preview
       Previews the output with QGLE.

-gs    Previews the output with GhostScript.

-version
       Selects a GLE version to run.

-compatibility
       Selects a GLE compatibility mode.

-calc  Runs GLE in "calculator" mode.

-catcsv
       Pretty print a CSV file to standard output.

-tex   Indicates that the script includes LaTeX expressions.

-inc   Creates an .inc file with LaTeX code.

-texincprefix
       Adds the given subdirectory to the path in the .inc file.

-mkinittex
       Creates "inittex.ini" from "init.tex".

-nocolor
       Forces grayscale output.

-transparent
       Creates transparent output (with -d png).

-noctrl-d
       Excludes CTRL-D from the PostScript output.
```

-nomaxpath
Disables the upper-bound on the drawing path complexity.

-noligatures
Disable the use of ligatures for 'fl' and 'fi'.

-gsoptions
Specify additional options for GhostScript.

-safemode
Disables reading/writing to the file system.

-allowread
Allows reading from the given path.

-allowwrite
Allows writing to the given path.

-keep Don't delete temporary files.

FILES

/usr/share/gle-graphics/4.2.5/glerc
The system wide configuration file.

~/.glerc
Per user configuration file.

ENVIRONMENT

GLE_USRLIB
The search path for include files.

GLE_TOP
The location of the fonts and other resources.