

Plotting in 1-D

MATLAB	MathGL									
<code>axis([0,5,-2,2])</code> Default: autofit (axis <code>auto</code>)	<code>gr.Ranges(0,5,-2,2)</code> Default: <code>x=-1:1, y=-1:1</code> Workaround: <code>gr.Ranges(x.Minimal(), x.Maximal(), y.Minimal(), y.Maximal())</code>									
<code>axis([0,5,-inf,inf])</code>	<code>gr.Range('x',0,5)</code>									
<code>axis([-inf,inf,-2,2])</code>	<code>gr.Range('y',-2,2)</code>									
<code>xlabel('x-axis')</code>	<code>gr.Label('x', "x-axis")</code>									
<code>ylabel('y-axis')</code>	<code>gr.Label('y', "y-axis")</code>									
<code>legend('sin(x)', 'x^2')</code>	<code>gr.AddLegend("sin(x)", "b")</code> <code>gr.AddLegend("\x^2", "g")</code> <code>gr.Legend()</code>									
<code>legend('exp(x)')</code> <code>legend('boxoff')</code>	<code>gr.AddLegend("exp(x)", "b")</code> <code>gr.Legend(1,1,"")</code>									
<code>legend('x','Location','northwest')</code>	<code>gr.AddLegend("x", "b")</code> <code>gr.Legend(0,1)</code>									
<code>legend('cos(x)', 'Orientation', 'horizontal')</code>	<code>gr.AddLegend("cos(x)", "b")</code> <code>gr.Legend("#-")</code>									
<table><tr><td>(0,1)</td><td>(0.5,1)</td><td>(1,1)</td></tr><tr><td>(0,0.5)</td><td>(0.5,0.5)</td><td>(1,0.5)</td></tr><tr><td>(0,0)</td><td>(0.5,0)</td><td>(1,0)</td></tr></table>	(0,1)	(0.5,1)	(1,1)	(0,0.5)	(0.5,0.5)	(1,0.5)	(0,0)	(0.5,0)	(1,0)	Legend alignment in MathGL: Values larger than 1 will give position outside of the graph. Default is (1,1).
(0,1)	(0.5,1)	(1,1)								
(0,0.5)	(0.5,0.5)	(1,0.5)								
(0,0)	(0.5,0)	(1,0)								
<code>plot(y)</code>	<code>gr.Plot(y)</code>									
<code>plot(t,y)</code>	<code>gr.Plot(t,y)</code>									
<code>plot(t0,y0,t1,y1)</code>	<code>gr.Plot(t0,y0)</code> <code>gr.Plot(t1,y1)</code>									
<code>plot(t,y,'b+')</code>	<code>gr.Plot(t,y,"b+")</code>									
Possible linestyle and linecolors: see follwing tables.										
<code>print('myfig','-depsc')</code> <code>print('myfig','-dpng')</code>	<code>gr.WriteEPS("myfig.eps")</code> <code>gr.WritePNG("myfig.png")</code> (compile w/ flag <code>-lpng</code>)									
<code>title('Plot title')</code>	<code>gr.Title("Plot title")</code> (title high above plot) <table><tr><td><code>gr.Subplot(1,1,0,"<-")</code> <code>gr.Title("Plot title")</code></td><td rowspan="2">} (title directly above plot)</td></tr></table>	<code>gr.Subplot(1,1,0,"<-")</code> <code>gr.Title("Plot title")</code>	} (title directly above plot)							
<code>gr.Subplot(1,1,0,"<-")</code> <code>gr.Title("Plot title")</code>	} (title directly above plot)									

Plotting in 2-D

MATLAB	MathGL
<code>colorbar</code>	<code>gr.Colorbar()</code>
<code>mesh(Z)</code>	<code>gr.Mesh(Z)</code>
<code>mesh(X,Y,Z)</code>	<code>gr.Mesh(X,Y,Z)</code>
<code>surface(Z)</code>	<code>gr.Surf(Z)</code>
<code>surface(X,Y,Z)</code>	<code>gr.Surf(X,Y,Z)</code>
<code>pcolor(Z)</code>	<code>gr.Tile(Z)</code>
<code>pcolor(X,Y,Z)</code>	<code>gr.Tile(X,Y,Z)</code>
<code>plot3(X,Y,Z)</code>	<code>gr.Plot(X,Y,Z)</code>

Additionally you have to add `gr.Rotate(50,60)` before the plot command for MathGL to create a 3-D box, otherwise the result is 2-D.

Linecolors^a:

blue	b
green	g
red	r
cyan	c
magenta	m
yellow	y
gray	h
green-blue	l
sky-blue	n
orange	q
green-yellow	e
blue-violet	u
purple	p

^aUpper-case letters will give a darker version of the lower-case version.

Linestyles:

solid	-
dashed	;
small dashed	=
long dashed	
dotted	:
dash-dotted	j
small dash-dotted	i

Linemarkers:

+	+
o	o
◇	d
·	·
△	^
▽	v
◁	<
▷	>
⊙	#.
⊞	#+
⊗	#x

Fonts

default font (STIX)	heros font
adventor font	heroscn font
bonum font	pagella font
<i>chorus font</i>	schola font
cursor font	termes font

Font sizes

gr.SetFontSizePT(12) sets the font size to 12pt
gr.SetFontSizeCM(0.5) sets the font size to 0.5cm
gr.SetFontSizeIN(0.22) sets the font size to 0.22 inch
In-Line changes and indices:
gr.Title("@{center-index}") in smaller size
gr.Title("_{lower-index}") in tiny size
gr.Title("~{upper-index}") in tiny size
gr.Title("\\big{Large}") in larger size
All sizes here are relative to the default sizes. E.g.: big in the Title is larger than in other places.

Figure 1: gr.SetFont("scholar") will set the font to "scholar"