Scilab: Graphing Quick Reference

Commands

`clf`	Clear plot window

Plot Options

Combine options into single string; `plot(x,x^3,'--r'))` plots dashed red line

`'-'`	Solid line	`'--'`	Dashed line	`':'`	Dotted line
		`'-.'`	Dash-dotted line		
`'r'`	Red	`'g'`	Green	`'b'`	Blue
`'c'`	Cyan	`'m'`	Magenta	`'y'`	Yellow
`'k'`	Black	`'w'`	White		

Grid and Axes Options

`g = gca()`	Set g to be current grid axes
`g.axes_visible="on"`	Display axes, 'on' or 'off'
`g.grid = [1 1]`	Set grid colors [hor vert]
`g.foreground = 3`	Set axis and frame colors
`g.thickness = 2`	Frame and axes thickness
`g.data_bounds = [-5,-5;5,5]`	Set axis boundary values
`g.title.text = "Plot Title"`	Set title of plot
`g.x_label.text = 'x Label'`	Set title of x-axis
`g.x_label.font_style = 2`	Change font style
`g.y_label.text = 'y Label'`	Set title of y-axis
`g.sub_tics = [5,10]`	Number of subticks, [x, y]
`g.font_size = 3`	Axis tick label size
`g.x_location = 'middle'`	Location of x-axis, 'top', 'middle', or 'bottom'
`g.y_location = 'middle'`	Location of y-axis, 'top', 'middle', or 'bottom'

Markers

```
plot(x,y,'s')  // add marker to point(s) x,y
// Marker option 's' can be any of the following:
```

`+`	Plus sign	`o`	Circle	`*`	Star
`.`	Point	`x`	Cross	`'s'`	Square
`'d'`	Diamond	`^`	Triangle, △	`v`	Triangle, ▽
		`<`	Triangle, ◁	`>`	Triangle, ▷

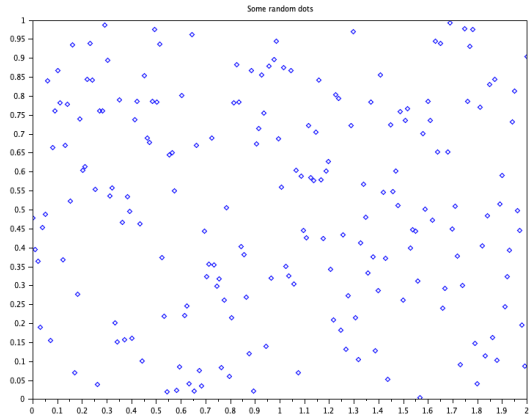
Color Values

1	Black	2	Blue	3	Green
4	Cyan	5	Red	6	Purple
7	Yellow	8	White		

Scatter Plots

`scatter(x,y)`	Scatter plot
`scatter3(x, y, z)`	3D scatter plot

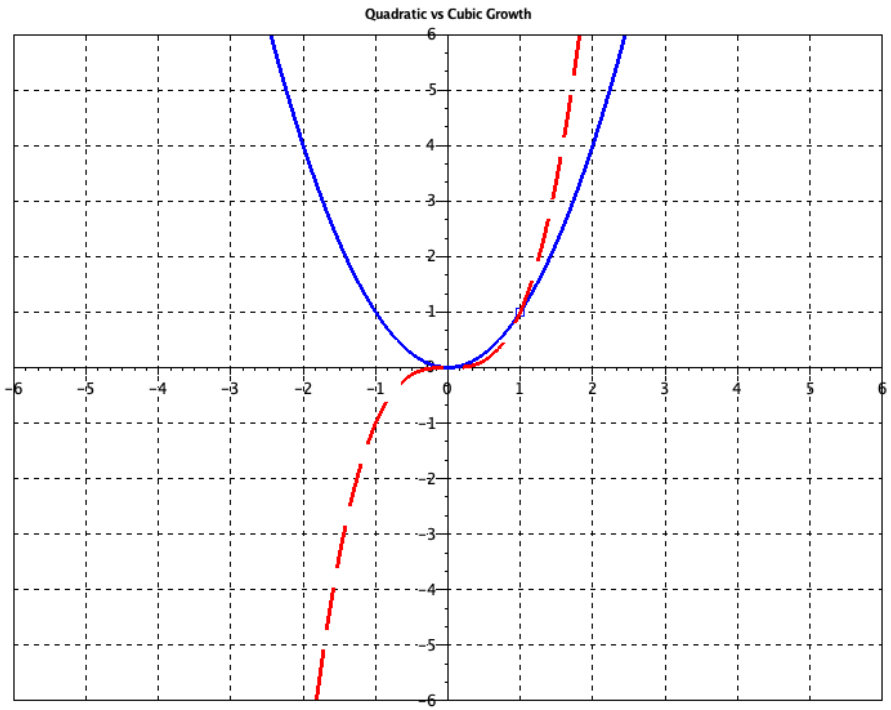
```
x = linspace(0,2,200)  // vector [0,0.01,0.02,...,2]
y = rand(1,length(x))  // vector of 200 random values
a = gca()
a.data_bounds = [0,0;2,1]
a.title.text = "Some random dots"
scatter(x,y,'d')       // scatter plot with diamonds
```



Sample 2D Plotting

```
clf
x = [ -3 : 0.1 : 3 ]
plot(x,x^2,'LineWidth',3)
plot(1,1,'s')
plot(x,x^3,'r--','LineWidth',3)

a=gca()
a.grid=[1,1];
a.font_size=2;
a.x_location="middle";
a.y_location="middle";
a.data_bounds=[-5,-5;5,5];
a.sub_tics=[5,2];
a.title.text="Quadratic vs Cubic Growth"
a.title.font_style = 8
```

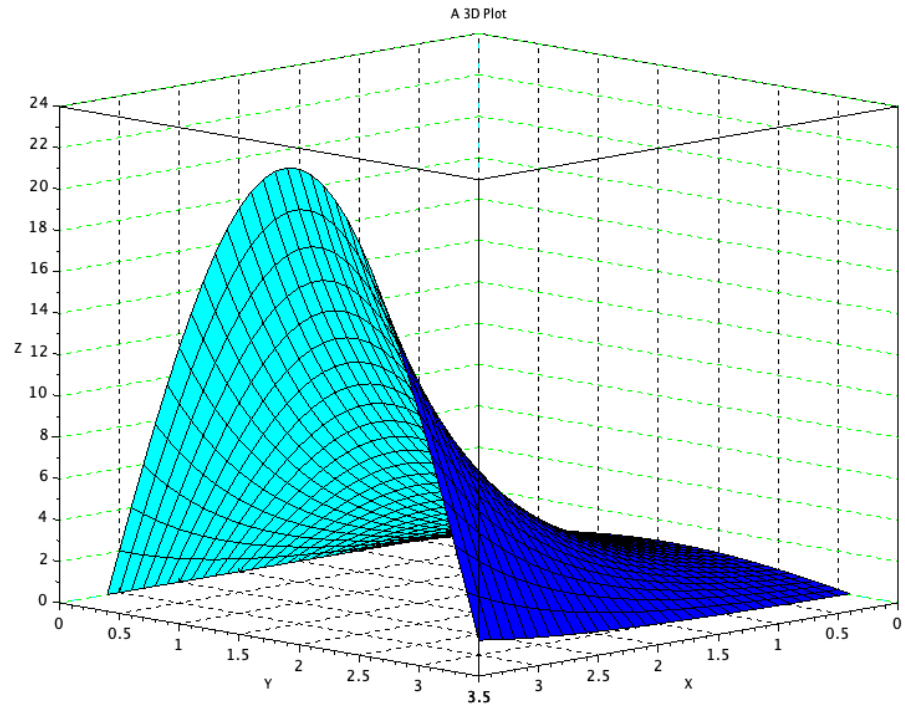


Sample 3D Plotting

```
clf

a=gca()
a.grid=[1,1,3]
a.font_size=2
a.title.text="A 3D Plot"

t=[0:0.1:1*%pi]'
z=exp(t)*sin(t')
plot3d(t,t,z)
```



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