

## > **plot[options]** - plot options

### Calling Sequence:

plot(f,h,v,opt1,opt2,...)

### Parameters:

f                    - a real function  
h                    - horizontal range  
v                    - vertical range (optional)  
opt1, opt2, . . . - various desired options

### Description:

The options to plot are given after the function(s), horizontal range, and vertical range, as equations of the form option = value. The following options are supported:

- **adaptive**  
If set to false, disables the use of adaptive plotting.
- **axes**  
Specifies the type of axes, one of: FRAME, BOXED, NORMAL, and NONE.
- **axesfont=l**  
Font for the labels on the tick marks of the axes, specified in the same manner as font.
- **color=n**  
Allows the user to specify the color of the curves to be plotted. The spelling "colour" may also be used. See ?plot,color for details.
- **coords=<name>**  
Indicates that a parametric plot is in the coordinate system specified by <coord\_name>. See plot[coords] for more information about the choices of coordinate system.
- **discont=s**  
Setting s be true forces plot to first call the function discont to determine the discontinuities of the input (or fdiscont if discont fails or if the input is not an expression) and then breaks the horizontal axis into appropriate intervals where the expression is continuous.
- **font=l**  
Font for text objects in the plot, l is a list [family, style, size], where family is one of TIMES, COURIER, HELVETICA, and SYMBOL. For TIMES, style may be one of ROMAN, BOLD, ITALIC or BOLDITALIC. For HELVETICA and COURIER style may be omitted or select one of BOLD, OBLIQUE, or BOLDOBLIQUE. SYMBOL does not accept a style option. The final value, size, is the point size to be used.
- **labels=[x,y]**  
This option specifies labels for the axes. The values of x and y must be strings. The default labels are the names of the variables in the original function to be plotted, if any.
- **labelfont=l**  
Font for the labels on the axes of the plot, specified in the same manner as font.
- **linestyle=n**  
Controls the dash pattern used to render lines in the plot. When n=1, the line is solid. For n=2 the style is dot, n=3 gives dash, and n=4 gives dash-dot.
- **numpoints=n**  
Specifies the minimum number of points to be generated (the default is n = 50). Note: plot employs an adaptive plotting scheme which automatically does more work where the function values do not lie close to a straight line. Hence plot will often generate more than the minimum number of points.
- **resolution=n**  
Sets the horizontal display resolution of the device in pixels (the default is n = 200). The value of n is used to

determine when the adaptive plotting scheme terminates. A higher value will result in more function evaluations for non-smooth functions.

- **sample**

Supplies a list of parameter values to be used for the initial sampling of the function(s). When coupled with `adaptive=false`, this option allows explicit control over the function evaluations performed by plot.

- **scaling**

Controls the scaling of the graph. Either `CONSTRAINED` or `UNCONSTRAINED`. Default is `UNCONSTRAINED`.

- **style=s**

The interpolation style must be one of `LINE`, `POINT`, `PATCH` or `PATCHNOGRID`. The default is `LINE`. `POINT` style plots points only, `LINE` interpolates between the points, `PATCH` uses the patch style for plots containing polygons, and `PATCHNOGRID` is the `PATCH` style without the grid lines.

- **symbol=s**

Symbol for points in the plot, `s` is one of `BOX`, `CROSS`, `CIRCLE`, `POINT`, and `DIAMOND`.

- **thickness=n**

Thickness of lines in the plot, `n` should be 0, 1, 2, or 3. 0 is the default thickness.

- **tickmarks=[m,n]**

This option specifies that a reasonable number of points no less than `m` and `n` should be marked along the `x`-axis and `y`-axis, respectively. Both `m` and `n` must be either a positive integer or the name 'default'. If tickmarks is desired along only one axis, use `xtickmarks` or `ytickmarks` instead.

- **title=t**

The title for the plot. `t` must be a character string. The default is no title.

- **titlefont=l**

Font for the title of the plot, specified in the same manner as `font`.

- **view=[xmin..xmax, ymin..ymax]**

This option indicates the minimum and maximum coordinates of the curve to be displayed on the screen. The default is the entire curve.

- **xtickmarks=n**

Indicates that a reasonable number of points no less than `n` should be marked along the horizontal axis; `n` must be a positive integer or a list. If `n` is a list, then the list of values is used to mark the axis; the corresponding option `ytickmarks=n` to specify the minimum number of divisions along the vertical axis, or a list of values used to mark the vertical axis.