Concept: lines — Using lines

Description

Lines occur in many contexts—in borders, axes, the ticks on axes, the outline around symbols, the connecting of points in a plot, and more. *linestyle*, *linealignmentstyle*, *linepatternstyle*, *linewidthstyle*, and *colorstyle* define the look of the line.

Syntax

The following affects how a line appears:

- **linestyle**: overall style
- **linealignmentstyle**: whether inside, outside, or centered
- **linepatternstyle**: whether solid, dashed, etc.
- **linewidthstyle**: its thickness
- **colorstyle**: its color and opacity

Remarks and examples

Remarks are presented under the following headings:

- **linestyle**
- **linealignmentstyle**
- **linepatternstyle**
- **linewidthstyle**
- **colorstyle**

*linestyle*, *linealignmentstyle*, *linepatternstyle*, *linewidthstyle*, and *colorstyle* are specified inside options that control how the line is to appear. Regardless of the object, these options usually have the same names:

- `lstyle(linestyle)`
- `lalign(linealignmentstyle)`
- `lpattern(linepatternstyle)`
- `lwidth(linewidthstyle)`
- `lcolor(colorstyle)`

Though for a few objects, such as markers, the form of the names is

- `(object)lstyle(linestyle)`
- `(object)lalign(linealignmentstyle)`
- `(object)lpattern(linepatternstyle)`
- `(object)lwidth(linewidthstyle)`
- `(object)lcolor(linecolorstyle)`
For instance,

- The options to specify how the lines connecting points in a plot are to appear are specified by the options `lstyle()`, `lalign()`, `lpattern()`, `lwidth()`, and `lcolor()`; see [G-3] `connect_options`.

- The options to specify how the outline appears on an area plot are specified by the options `lstyle()`, `lalign()`, `lpattern()`, `lwidth()`, and `lcolor()`; see [G-3] `area_options`.

- The suboptions to specify how the border around a textbox, such as a title, are to appear are named `lstyle()`, `lalign()`, `lpattern()`, `lwidth()`, and `lcolor()`; see [G-3] `textbox_options`.

- The options to specify how the outline around markers is to appear are specified by the options `mlstyle()`, `mlalign()`, `mlpattern()`, `mlwidth()`, and `mlcolor()`; see [G-3] `marker_options`.

Wherever these options arise, they always come as a group, and they have the same meaning.

**linestyle**

`linestyle` is specified inside the `lstyle()` option or sometimes inside the `<object>lstyle()` option.

`linestyle` specifies the overall style of the line: its alignment (inside, outside, centered), pattern (solid, dashed, etc.), thickness, and color.

You need not specify the `lstyle()` option just because there is something you want to change about the look of the line and, in fact, most of the time you do not. You specify `lstyle()` when another style exists that is exactly what you desire or when another style would allow you to specify fewer changes to obtain what you want.

See [G-4] `linestyle` for the list of what may be specified inside the `lstyle()` option.

**linealignmentstyle**

`linealignmentstyle` is specified inside the `lalign()` or `<object>lalign()` option.

`linealignmentstyle` specifies whether the line is drawn inside, is drawn outside, or is centered on the outline of markers, fill areas, bars, and boxes.

See [G-4] `linealignmentstyle` for the list of what may be specified inside the `lalign()` option.

**linepatternstyle**

`linepatternstyle` is specified inside the `lpattern()` or `<object>lpattern()` option.

`linepatternstyle` specifies whether the line is solid, dashed, etc.

See [G-4] `linepatternstyle` for the list of what may be specified inside the `lpattern()` option.

**linewidthstyle**

`linewidthstyle` is specified inside the `lwidth()` or `<object>lwidth()` option.

`linewidthstyle` specifies the thickness of the line.

See [G-4] `linewidthstyle` for the list of what may be specified inside the `lwidth()` option.
colorstyle

colorstyle is specified inside the \lcolor() or \langle object⟩\lcolor() option.

colorstyle specifies the color and opacity of the line.

See [G-4] colorstyle for the list of what may be specified inside the \lcolor() option.

Also see

[G-3] \textit{connect\_options} — Options for connecting points with lines

[G-4] \textit{colorstyle} — Choices for color

[G-4] \textit{linealignmentstyle} — Choices for whether outlines are inside, outside, or centered

[G-4] \textit{linepatternstyle} — Choices for whether lines are solid, dashed, etc.

[G-4] \textit{linestyle} — Choices for overall look of lines

[G-4] \textit{linewidthstyle} — Choices for thickness of lines