### Syntax

<table>
<thead>
<tr>
<th>added_line_options</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>yline(linearg)</td>
<td>add horizontal lines at specified ( y ) values</td>
</tr>
<tr>
<td>xline(linearg)</td>
<td>add vertical lines at specified ( x ) values</td>
</tr>
<tr>
<td>tline(time_linearg)</td>
<td>add vertical lines at specified ( t ) values</td>
</tr>
</tbody>
</table>

`yline()`, `xline()`, and `tline()` are merged-implicit; see [G-4] concept: repeated options and see Interpretation of repeated options below.

where `linearg` is

\[ \text{numlist} \ [\ , \ \text{suboptions}] \]

For a description of `numlist`, see [U] 11.1.8 numlist.

and where `time_linearg` is

\[ \text{datelist} \ [\ , \ \text{suboptions}] \]

For a description of `datelist`, see [U] 11.1.9 datelist.

<table>
<thead>
<tr>
<th>suboptions</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>axis(#)</td>
<td>which axis to use, ( 1 \leq # \leq 9 )</td>
</tr>
<tr>
<td>style(addedlinestyle)</td>
<td>overall style of added line</td>
</tr>
<tr>
<td>no extend</td>
<td>extend line through plot region’s margins</td>
</tr>
<tr>
<td>lstyle(linestyle)</td>
<td>overall style of line</td>
</tr>
<tr>
<td>lpattern(linepatternstyle)</td>
<td>line pattern (solid, dashed, etc.)</td>
</tr>
<tr>
<td>lwidth(linewidthstyle)</td>
<td>thickness of line</td>
</tr>
<tr>
<td>lcolor(colorstyle)</td>
<td>color of line</td>
</tr>
</tbody>
</table>


### Description

`yline()`, `xline()`, and `tline()` are used with `twoway` to add lines to the plot region. `tline()` is an extension to `xline()`; see [TS] `tsline` for examples using `tline()`.
**Options**

`yline(linearg), xline(linearg),` and `tline(time_linearg)` specify the $y$, $x$, and $t$ (time) values where lines should be added to the plot.

**Suboptions**

`axis(#)` is for use only when multiple $y$, $x$, or $t$ axes are being used (see [G-3] `axis_choice_options`). `axis()` specifies to which axis the `yline()`, `xline()`, or `tline()` is to be applied.

`style(addedlinestyle)` specifies the overall style of the added line, which includes `[no]extend` and `lstyle(linestyle)` documented below. See [G-4] `addedlinestyle`. The `[no]extend` and `lstyle()` options allow you to change the added line’s attributes individually, but `style()` is the starting point.

You need not specify `style()` just because there is something that you want to change, and in fact, most people seldom specify the `style()` option. You specify `style()` 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.

`extend` and `noextend` specify whether the line should extend through the plot region’s margin and touch the axis; see [G-3] `region_options`. Usually `noextend` is the default, and `extend` is the option, but that is determined by the overall `style()` and, of course, the scheme; see [G-4] `schemes intro`.

`lstyle(linestyle), lpattern(linepatternstyle), lwidth(linewidthstyle),` and `lcolor(colorstyle)` specify the look of the line; see [G-2] `graph twoway line`. `lstyle()` can be of particular use:

To create a line with the same look as the lines used to draw axes, specify `lstyle(foreground)`.

To create a line with the same look as the lines used to draw grid lines, specify `lstyle(grid)`.

**Remarks and examples**

`yline()` and `xline()` add lines where specified. If, however, your interest is in obtaining grid lines, see the grid option in [G-3] `axis_label_options`.

Remarks are presented under the following headings:

*Typical use*

*Interpretation of repeated options*

**Typical use**

`yline()` or `xline()` are typically used to add reference values:

```
  . scatter yvar xvar, yline(10)
  . scatter yvar year, xline(1944 1989)
```

To give the line in the first example the same look as used to draw an axis, we could specify

```
  . scatter yvar xvar, yline(10, lstyle(foreground))
```

If we wanted to give the lines used in the second example the same look as used to draw grids, we could specify

```
  . scatter yvar year, xline(1944 1989, lstyle(grid))
```
Interpretation of repeated options

Options yline() and xline() may be repeated, and each is executed separately. Thus different styles can be used for different lines on the same graph:

```
  . scatter yvar year, xline(1944) xline(1989, lwidth(3))
```

Reference


Also see

- [G-4] `addlinestyle` — Choices for overall look of added lines
- [G-4] `colorstyle` — Choices for color
- [G-4] `linepatternstyle` — Choices for whether lines are solid, dashed, etc.
- [G-4] `linestyle` — Choices for overall look of lines
- [G-4] `linewidthstyle` — Choices for thickness of lines