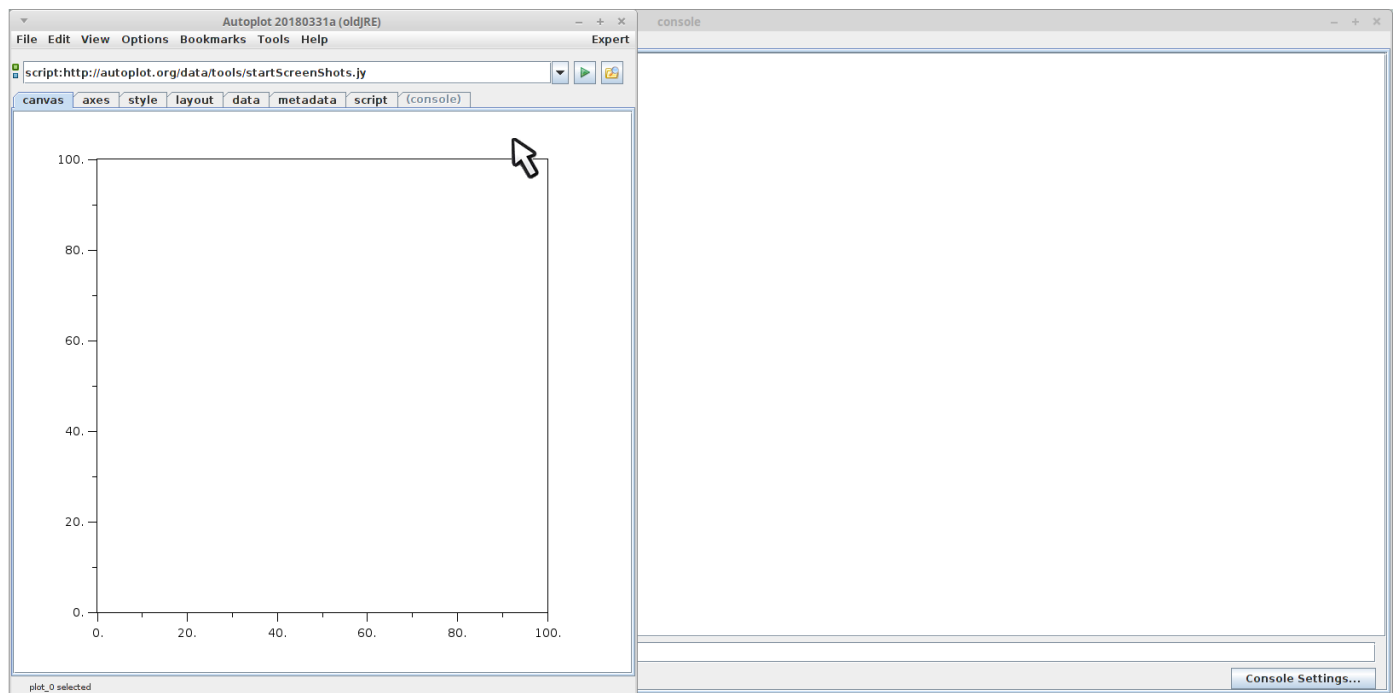
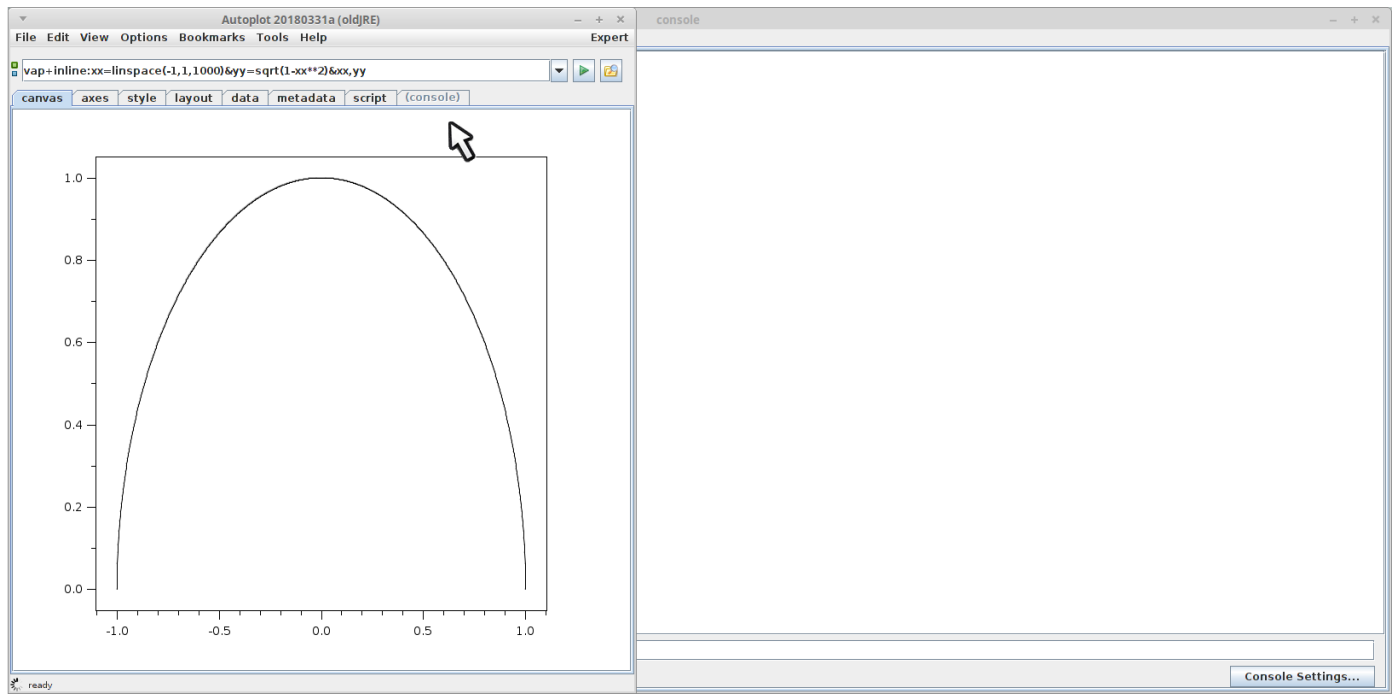


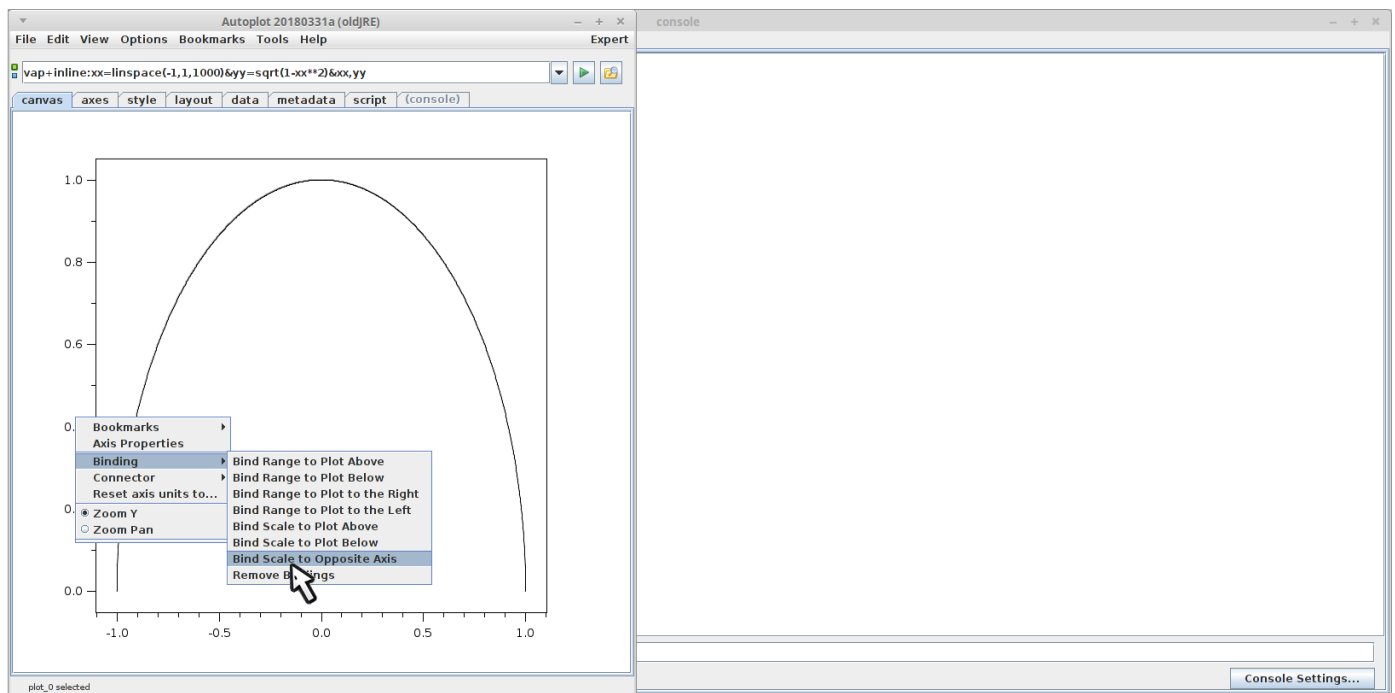
1. This shows how LaTeX can be used in annotations. First plot an equation.



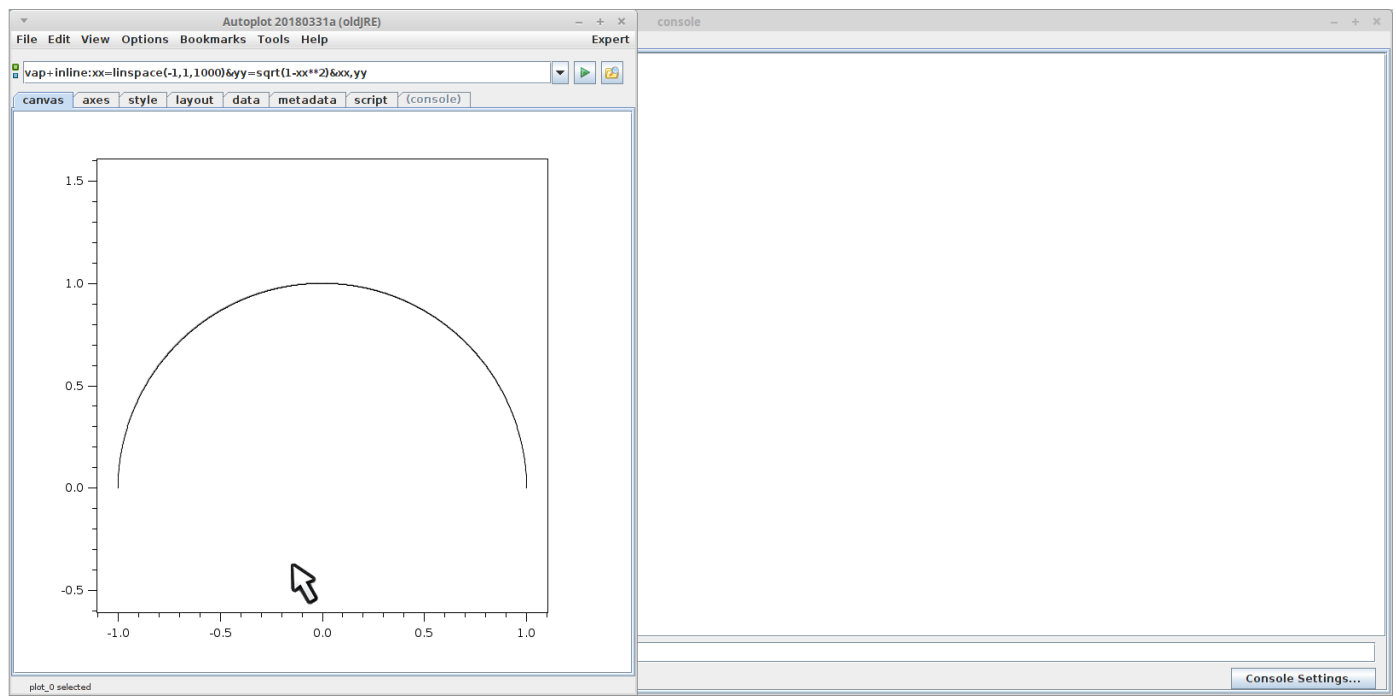
2. This "inline" URI is Jython code which represents a semicircle.



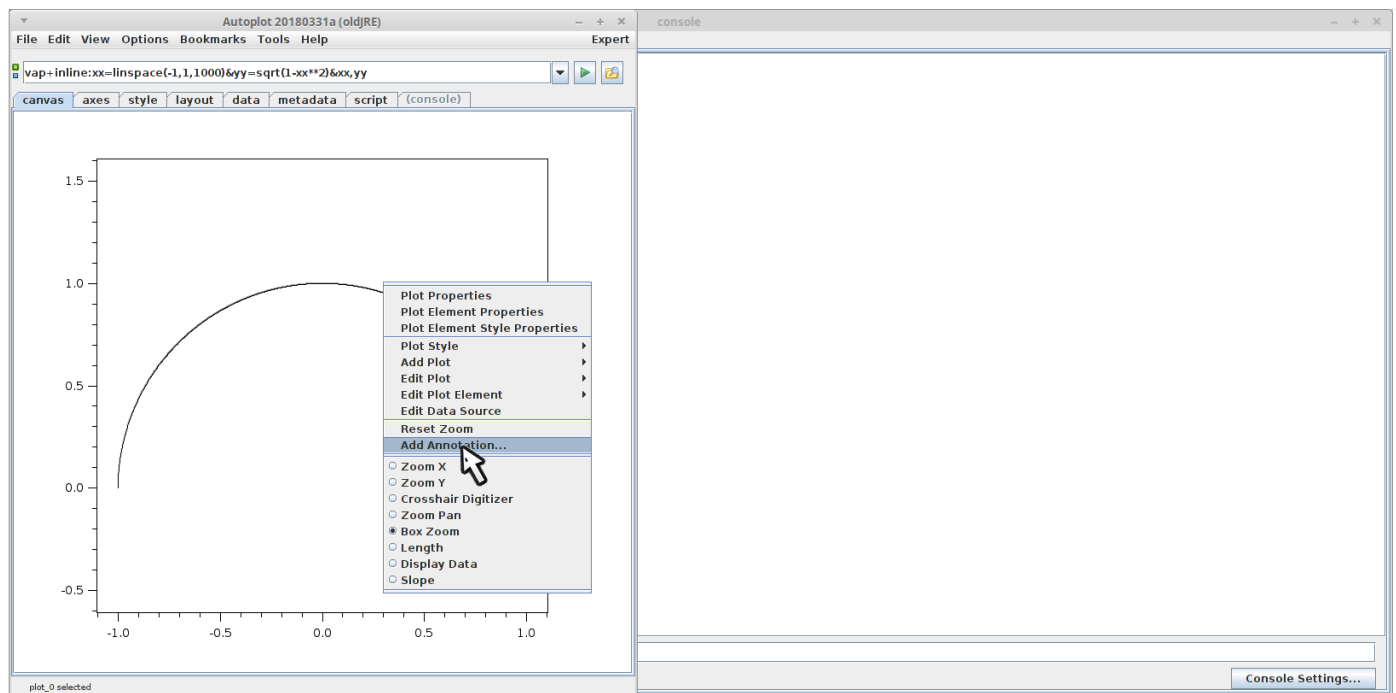
3. Click on the y-axis and bind the scale to the x-axis.



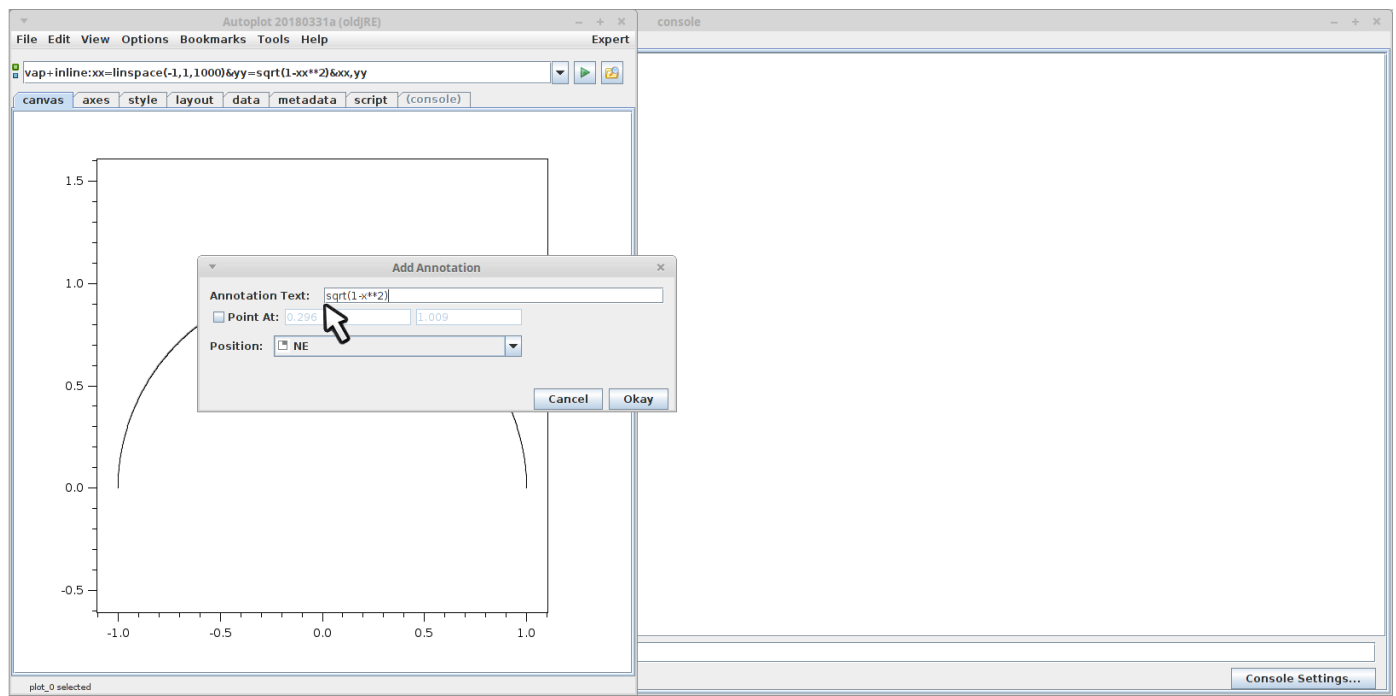
4. Now we'll add an annotation.



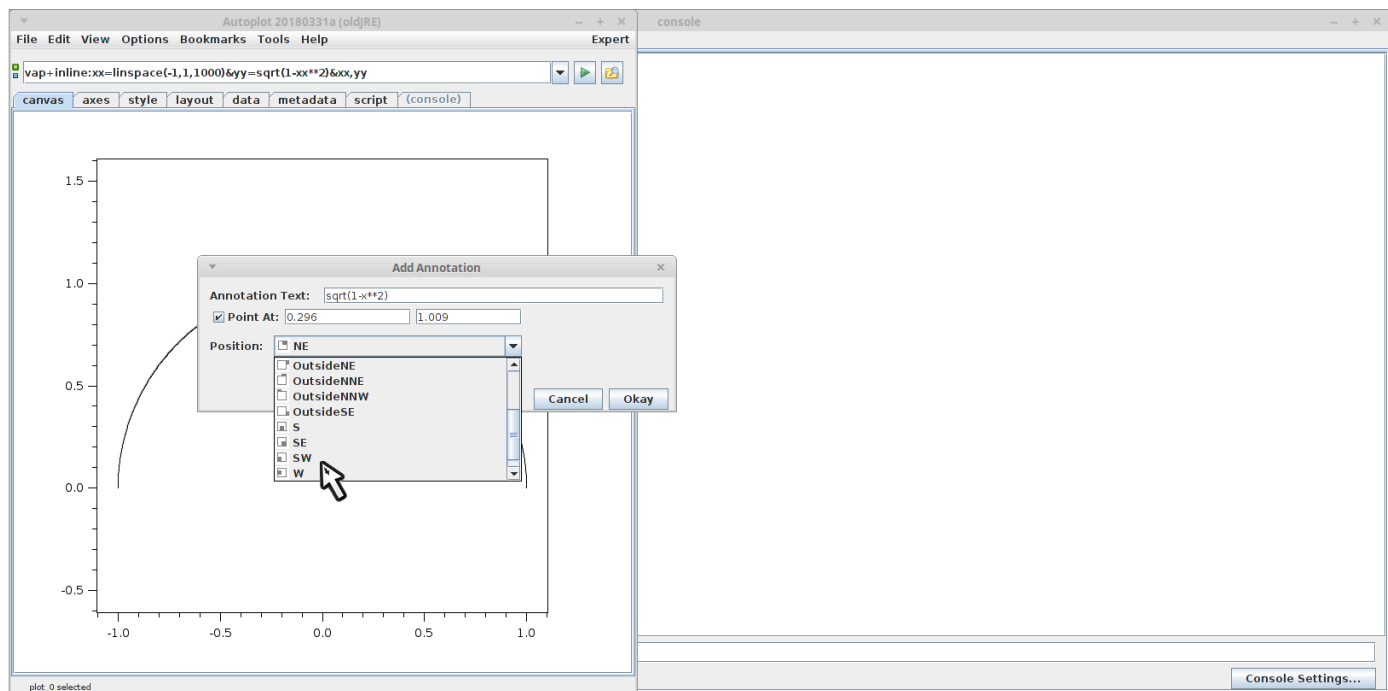
## 5. Right-click (command-click) to "Add annotation..."



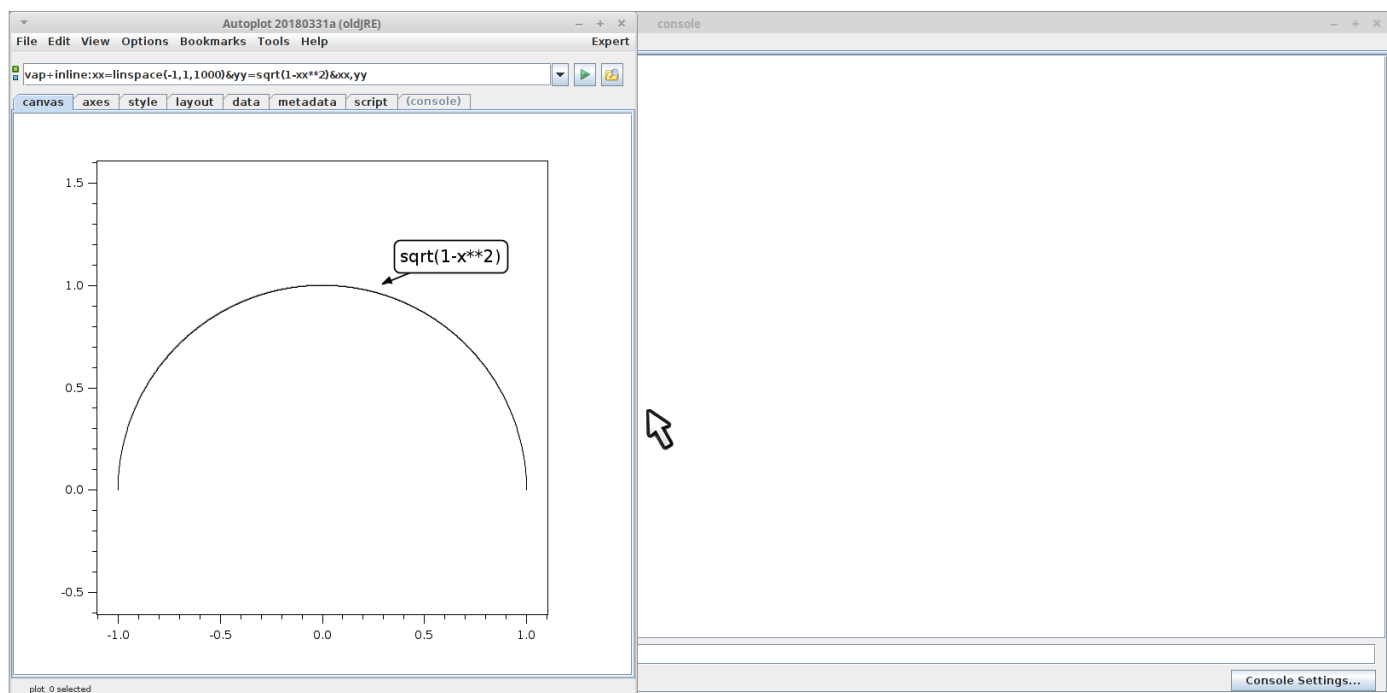
## 6. Set the text...



7. Select point at (which contains the original right-click location), and SW for the position.

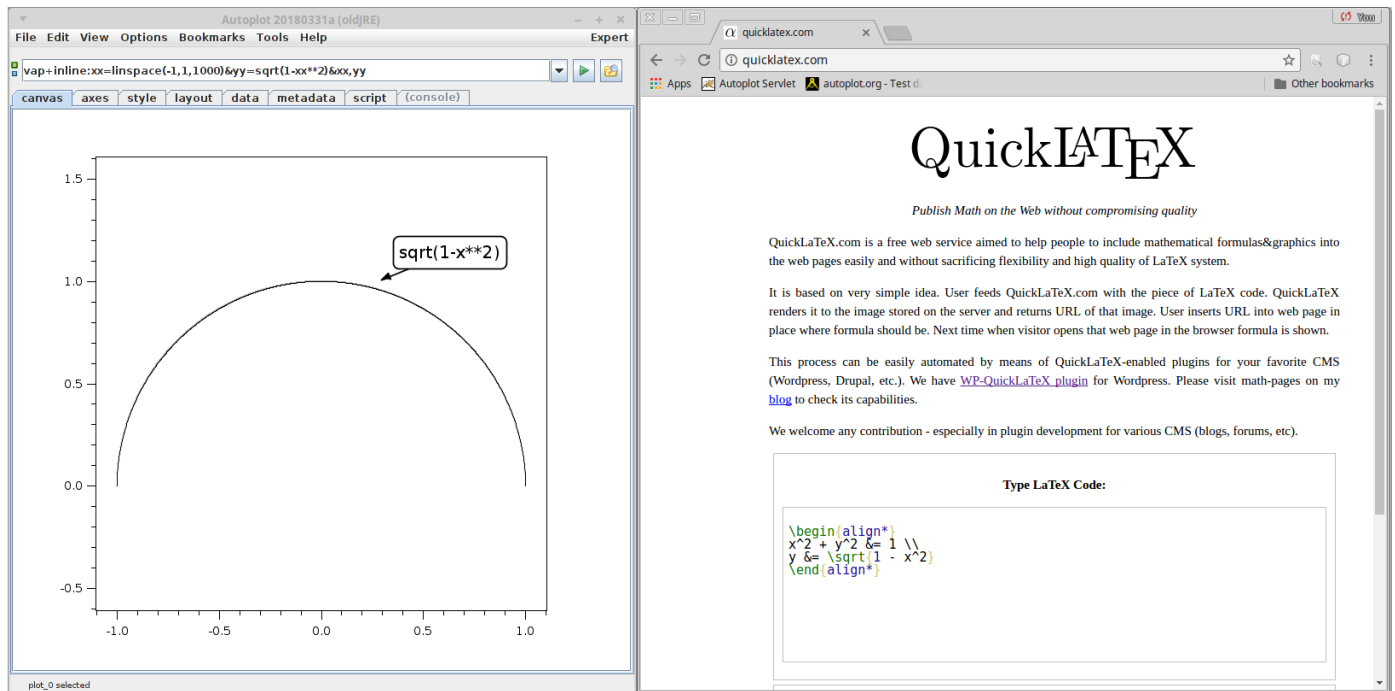


8. This is an annotation showing Jython code. An annotation has many controls which can be set in its property editor.

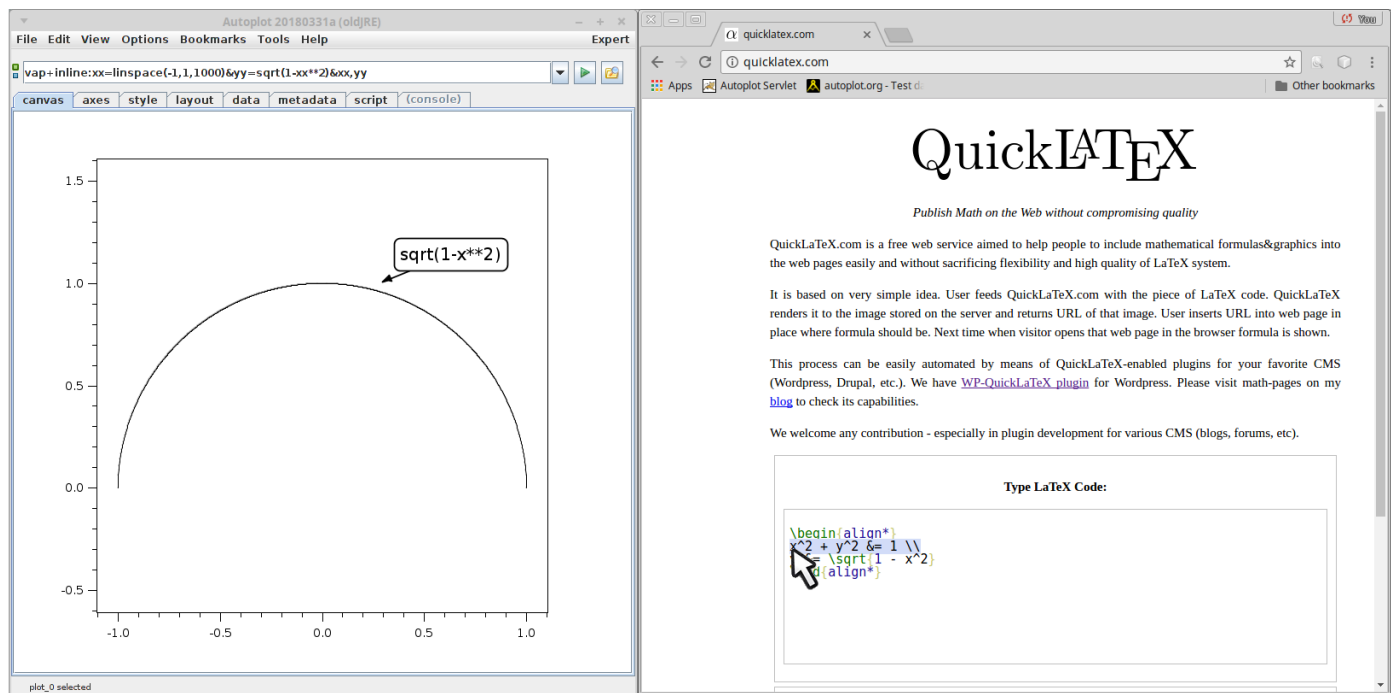




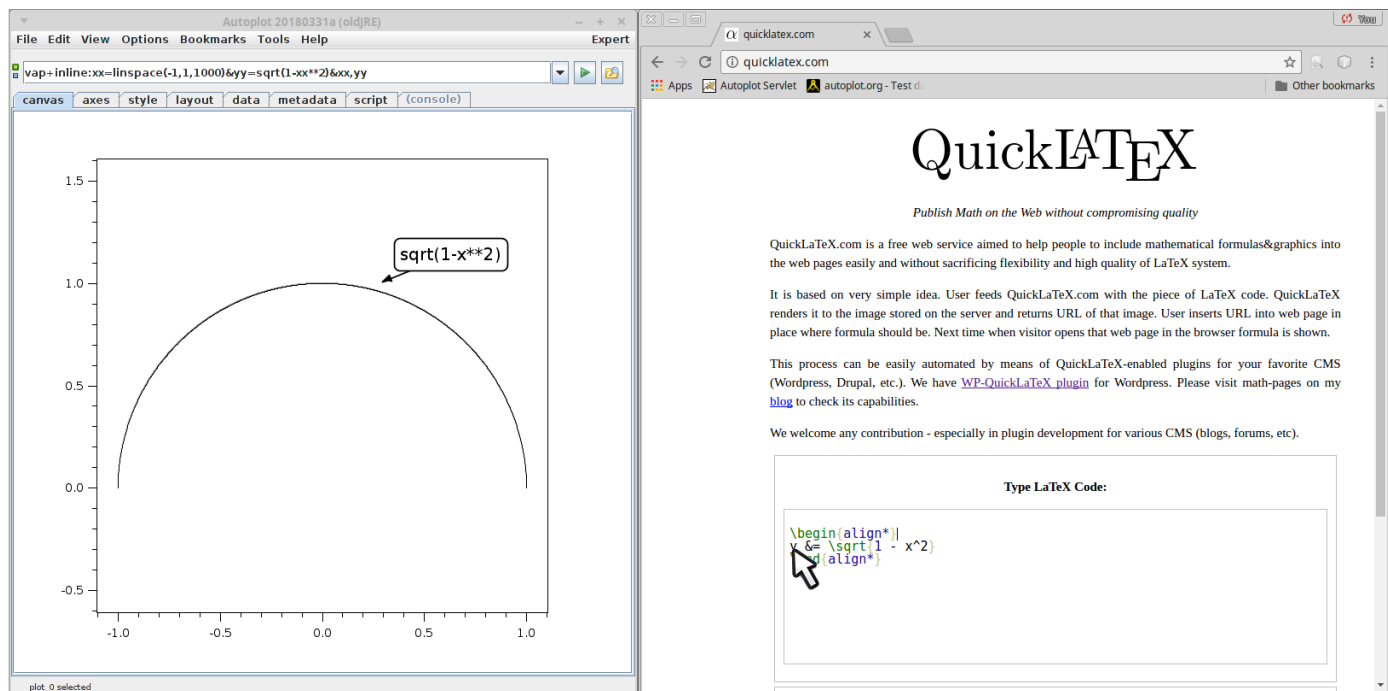
9. We wish to show how the website [quicklatex.com](http://quicklatex.com) can be used to render LaTeX expressions in annotations.



10. Modify the LaTeX code to the expression desired.



1.1. We want to show just the one-line expression.



12. Scroll down, click "Render" (things may have changed since this was recorded in April 2018), and the LaTeX is rendered below.

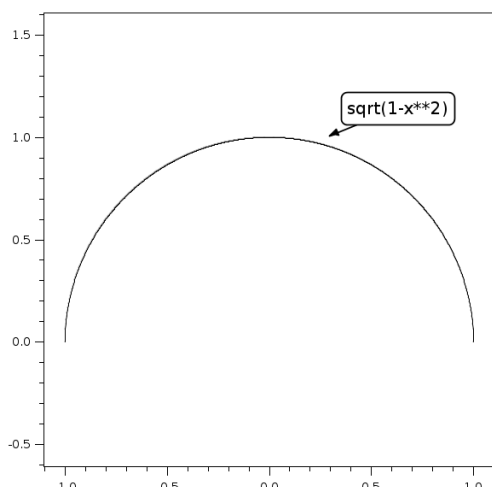
Autoplot 20180331a (oldJRE)

File Edit View Options Bookmarks Tools Help

Expert

vap->inline:xx=linspace(-1,1,1000)&yy=sqrt(1-xx\*\*2)&xx,yy

canvas axes style layout data metadata script (console)



plot\_0 selected

quicklatex.com

quicklatex.com

Autoplot Servlet autoplot.org - Test d...

Other bookmarks

place where formula should be. Next time when visitor opens that web page in the browser formula is shown.

This process can be easily automated by means of QuickLaTeX-enabled plugins for your favorite CMS (Wordpress, Drupal, etc.). We have [WP-QuickLaTeX plugin](#) for Wordpress. Please visit math-pages on my [blog](#) to check its capabilities.

We welcome any contribution - especially in plugin development for various CMS (blogs, forums, etc).

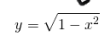
Type LaTeX Code:

```
\begin{align*}y &= \sqrt{1 - x^2} \\ \end{align*}
```

Choose Options

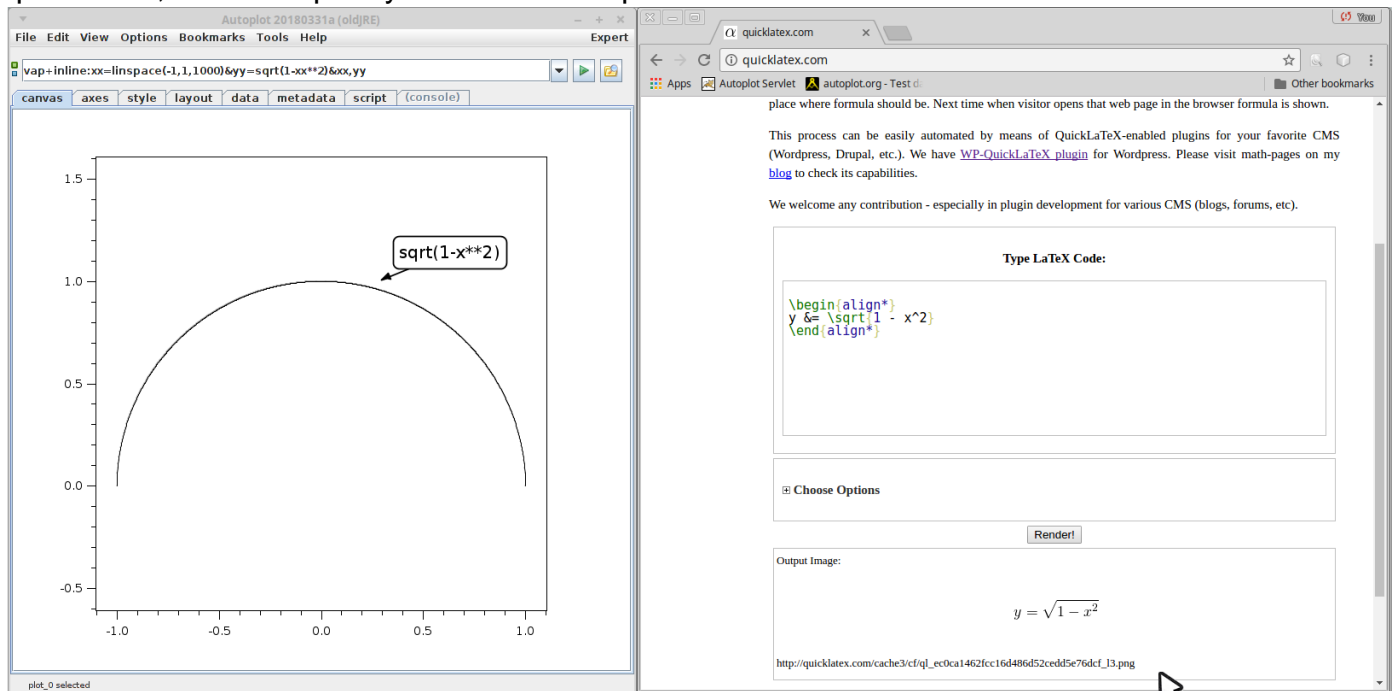
Render!

Output Image:



[http://quicklatex.com/cache3/cf/ql\\_ec0ca1462fcc16d486d52cedd5e76dcf\\_13.png](http://quicklatex.com/cache3/cf/ql_ec0ca1462fcc16d486d52cedd5e76dcf_13.png)

13. This image could be saved to your machine, but the site also provides a link. Note using this link introduces an external dependence, so the .vap may not load if the quicklatex.com is down.



The image shows two side-by-side windows. The left window is titled "Autoplot 20180331a (oldJRE)" and displays a plot of the function  $y = \sqrt{1-x^2}$ . The plot is a semi-circle on the interval  $x \in [-1, 1]$  with  $y \in [0, 1]$ . A label  $\sqrt{1-x^2}$  with an arrow points to the curve. The right window is a web browser showing the "quicklatex.com" website. The website content includes a description of the service, a "Type LaTeX Code:" section with a code block, a "Choose Options" section, a "Render!" button, and an "Output Image:" section showing the rendered formula  $y = \sqrt{1-x^2}$ . A URL link is provided at the bottom of the output image section.

Autoplot 20180331a (oldJRE)

File Edit View Options Bookmarks Tools Help

vap->inline:xx=linspace(-1,1,1000)&yy=sqrt(1-xx\*\*2)&xx,yy

canvas axes style layout data metadata script (console)

plot\_0 selected

quicklatex.com

place where formula should be. Next time when visitor opens that web page in the browser formula is shown.

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We welcome any contribution - especially in plugin development for various CMS (blogs, forums, etc).

Type LaTeX Code:

```
\begin{align*}y &= \sqrt{1 - x^2} \\ \end{align*}
```

Choose Options

Render!

Output Image:

$$y = \sqrt{1 - x^2}$$

[http://quicklatex.com/cache3/cf/ql\\_ec0ca1462fcc16d486d52cedd5e76dcf\\_13.png](http://quicklatex.com/cache3/cf/ql_ec0ca1462fcc16d486d52cedd5e76dcf_13.png)

14. Copy the link address of the image into the clipboard buffer.

The image shows two side-by-side windows. The left window is titled "Autoplot 20180331a (old) [RE]" and contains a plot of the function  $y = \sqrt{1-x^2}$ . The plot is a semi-circle on a coordinate system with x-axis from -1.0 to 1.0 and y-axis from -0.5 to 1.5. A label  $\sqrt{1-x^2}$  with an arrow points to the curve. The right window is a web browser showing the "quicklatex.com" website. It displays the LaTeX code 
$$y = \sqrt{1-x^2}$$
 and a "Copy" button below it. The URL in the address bar is [http://quicklatex.com/cache3/cfml\\_eck/a1463fc1e4489d53ved15e76d1d13.png](http://quicklatex.com/cache3/cfml_eck/a1463fc1e4489d53ved15e76d1d13.png).

Autoplot 20180331a (old) [RE]

File Edit View Options Bookmarks Tools Help

vap+inline:xx=linspace(-1,1,1000)&yy=sqrt(1-xx\*\*2)&xx,yy

canvas axes style layout data metadata script (console)

plot\_0 selected

quicklatex.com

place where formula should be. Next time when visitor opens that web page in the browser formula is shown.

This process can be easily automated by means of QuickLaTeX-enabled plugins for your favorite CMS (Wordpress, Drupal, etc.). We have [WP-QuickLaTeX plugin](#) for Wordpress. Please visit math-pages on my [blog](#) to check its capabilities.

We welcome any contribution - especially in plugin development for various CMS (blogs, forums, etc).

Type LaTeX Code:

```
\begin{align*}y &= \sqrt{1 - x^2} \\ \end{align*}
```

Choose Options

Render!

Output Image:

$$y = \sqrt{1 - x^2}$$

[http://quicklatex.com/cache3/cfml\\_eck/a1463fc1e4489d53ved15e76d1d13.png](http://quicklatex.com/cache3/cfml_eck/a1463fc1e4489d53ved15e76d1d13.png)

Copy Ctrl+C

## 15. Edit the annotation's properties...

The image shows two side-by-side windows. The left window is titled "Autoplot 20180331a (old) [RE]" and contains a plot of a semicircle  $y = \sqrt{1-x^2}$  from  $x = -1$  to  $x = 1$ . A text annotation  $\sqrt{1-x^2}$  is placed above the curve. A context menu is open over the annotation, showing options: "Annotation Properties" (selected), "Attach to Data", "Delete Annotation", "Move Annotation", and "Point At". The right window is a web browser showing the "quicklatex.com" website. It displays the LaTeX code 
$$y = \sqrt{1-x^2}$$
 and the rendered output image of the same equation.

Autoplot 20180331a (old) [RE]

File Edit View Options Bookmarks Tools Help

vap+inline:xx=linspace(-1,1,1000)&yy=sqrt(1-xx\*\*2)&xx,yy

canvas axes style layout data metadata script (console)

Annotation Properties

- ☒ Attach to Data
- ☐ Delete Annotation
- ☐ Move Annotation
- ☐ Point At

quicklatex.com

place where formula should be. Next time when visitor opens that web page in the browser formula is shown.

This process can be easily automated by means of QuickLaTeX-enabled plugins for your favorite CMS (Wordpress, Drupal, etc.). We have [WP-QuickLaTeX plugin](#) for Wordpress. Please visit math-pages on my [blog](#) to check its capabilities.

We welcome any contribution - especially in plugin development for various CMS (blogs, forums, etc).

Type LaTeX Code:

```
\begin{align*}y &= \sqrt{1-x^2} \\ \end{align*}
```

Choose Options

Render!

Output Image:

$$y = \sqrt{1-x^2}$$

<http://quicklatex.com/cache3/cf/qc1462f6164486d52cedd5e76dc-f13.png>

The screenshot shows the QuickLaTeX web interface. On the left, a plot of the function  $y = \sqrt{1-x^2}$  is displayed. A 'Property Editor for annotation\_0' dialog box is open, showing various properties for the annotation, such as 'controller', 'fontSize', 'fontWeight', 'text', and 'textColor'. The 'text' property is set to  $\sqrt{1-x^2}$ . On the right, the 'Type LaTeX Code:' section shows the LaTeX code for the plot: 
$$y = \sqrt{1-x^2}$$
. Below this, the 'Choose Options' section is visible, and the 'Render!' button is present. The 'Output Image:' section shows the rendered plot of the function.



17. Paste the URL link location from the quicklatex.com website.

The image shows two side-by-side windows. The left window is 'AutoPlot 20180331a (old) JRE' with a menu bar (File, Edit, View, Options, Bookmarks, Tools, Help) and a toolbar. The main area has tabs for 'canvas', 'axes', 'style', 'layout', 'data', 'metadata', 'script', and '(console)'. A plot is visible with axes ranging from -1.0 to 1.0 on the x-axis and -0.5 to 1.5 on the y-axis. A 'Property Editor for annotation\_0' dialog is open, showing a table of properties and values. The right window is a web browser showing 'quicklatex.com'. The page contains text about QuickLaTeX-enabled plugins and a 'Type LaTeX Code:' section with a code box containing LaTeX code for a square root function. Below this is a 'Choose Options' section and a 'Render!' button. The 'Output Image:' section shows the rendered formula  $y = \sqrt{1 - x^2}$  and a URL.

**Property Editor for annotation\_0**

Property Name	Value
anchorType	PLOT
background	white
borderType	ROUNDED_RECTANGLE
columnId	marginColumn_0
controller	org.autoplot.dom.AnnotationController@782...
fontSize	1.4em
foreground	black
id	annotation_0
overrideColors	<input type="checkbox"/> false
plotId	plot_0
pointAtX	0.296
pointAtY	1.009
rowId	row_1
showArrow	<input checked="" type="checkbox"/> true
text	$\sqrt{1-x^2}$
textColor	black
url	http://quicklatex.com/cache3/cf/ql_ec0ca1462...
xrange	0.296 to 0.296
yrange	1.009 to 1.009

**Type LaTeX Code:**

```
\begin{align*}y &= \sqrt{1 - x^2} \\ \end{align*}
```

**Choose Options**

**Render!**

**Output Image:**

$$y = \sqrt{1 - x^2}$$

[http://quicklatex.com/cache3/cf/ql\\_ec0ca1462fca164486d52cedd5e76dc-f\\_13.png](http://quicklatex.com/cache3/cf/ql_ec0ca1462fca164486d52cedd5e76dc-f_13.png)

18. The LaTeX image is painted on to the canvas in the annotation. Note this is only rendered at screen resolution, so it may not be suitable for publication. A future version of Autoplot may address this.

