

## Exporting a plot

Created using Maple 14.01

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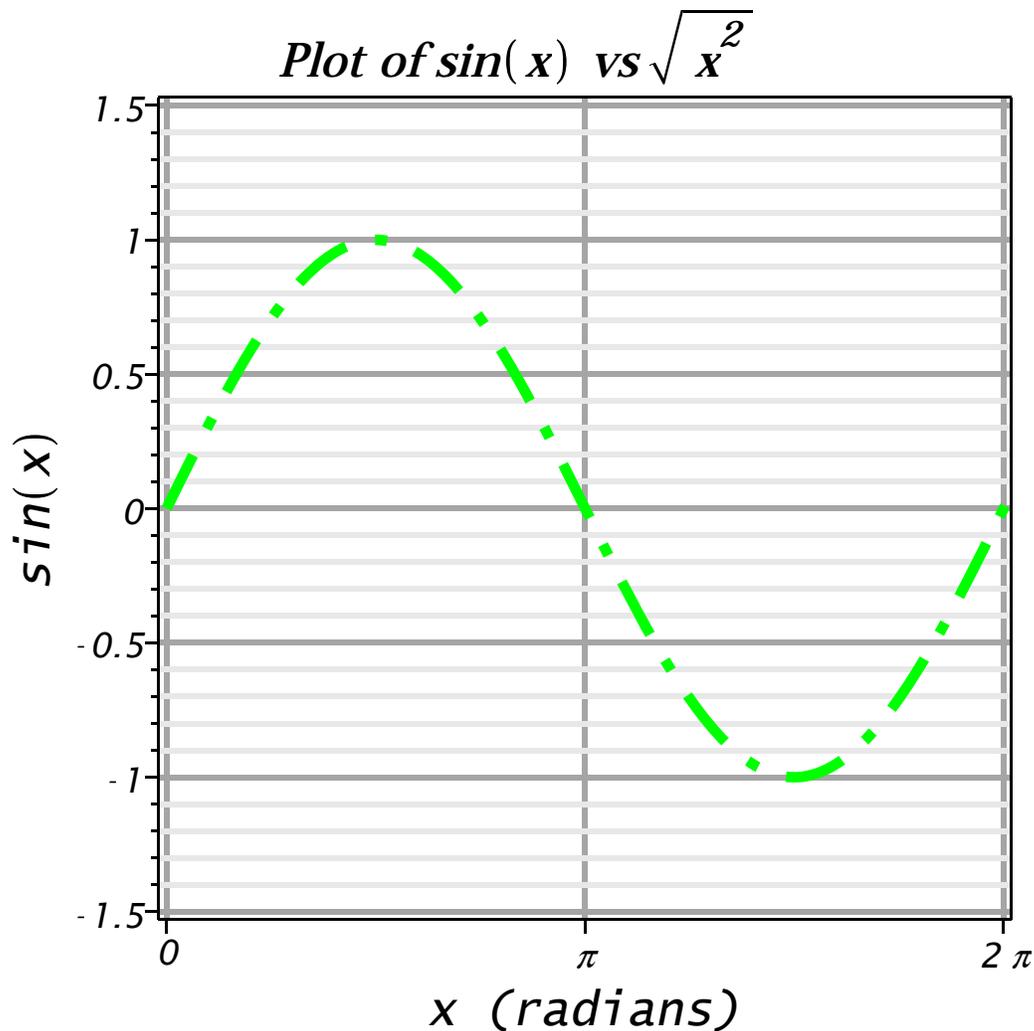
```
> restart;
with(StringTools) :
FormatTime("%m-%d-%Y, %H:%M");
"08-04-2012, 19:32"
```

(1)

Here is the plot that was created in "plotting a function.mw". Often you may want to save this a plot as an image to use in a report or a presentation. If you are using LaTeX to write a report it is convenient to have a figure save in the ".eps" format (encapsulated postscript). The easiest way that I've found to make an "eps" figure is by right clicking on the plot and then selecting **Export**  $\Rightarrow$  **Encapsulated Postscript**. You will get a high-resolution figure to include in your LaTeX work. You can see the resulting output by viewing "sinPlot.eps" on the website.

If you're using something like PowerPoint to make a presentation you may want a "jpeg" (or similar) figure. You can generate a .jpg-file using the right-click and then **Export** method, however you will get a low-resolution figure at will look like garbage in your presentation. You can see the resulting output by viewing "sinPlotLarge.jpg" on the website. There is an awkward work-around described below.

```
> plot(sin(x), x = 0 .. 4·Pi, axes = boxed, view = [0 .. 2·Pi, -1.5 .. 1.5], labels = [typeset(x,
" (radians)"), typeset(sin(x)) ], labeldirections = ["horizontal", "vertical"], title
= typeset("Plot of ", sin(x), " vs ",  $\sqrt{x^2}$ ), linestyle = dashdot, thickness = 4, tickmarks
= [spacing( $\pi$ ), default], colour = green, font = [Times, Italics, 14], axesfont = [Helvetica,
10], labelfont = [Courier, 14], axis = [gridlines = [thickness = 2]]);
```



The work-around involves clicking on the graph and then dragging the corner of the blue frame that pops up to resize the plot. As far as I know, there is no way to define the size of the plot in the Maple command. I also don't know of a way to keep the aspect ratio of the plot from changing. Also, you will need to increase the font sizes so that the axes labels and title don't look tiny compared to expanded plot. You will also need to increase the line thickness if you want it to maintain the same relative size. You will find that the axes surrounding the plot will look thin when the plot size is increased, so will the grid lines. The thickness of the grid lines can be increased, but as far as I know the axes thickness cannot be changed in Maple 14. (My understanding is that in Maple 16 the axes thickness can be changed.) Note that when I created the font size of the title, the "2" in the  $x$ -squared was shifted up way too high. Go figure... Exporting as an eps will still work well (see "sinPlotLarge.eps") and now you will get a higher-resolution jpg that may be adequate for inclusion in a presentation (see "sinPlotLarge.jpg").

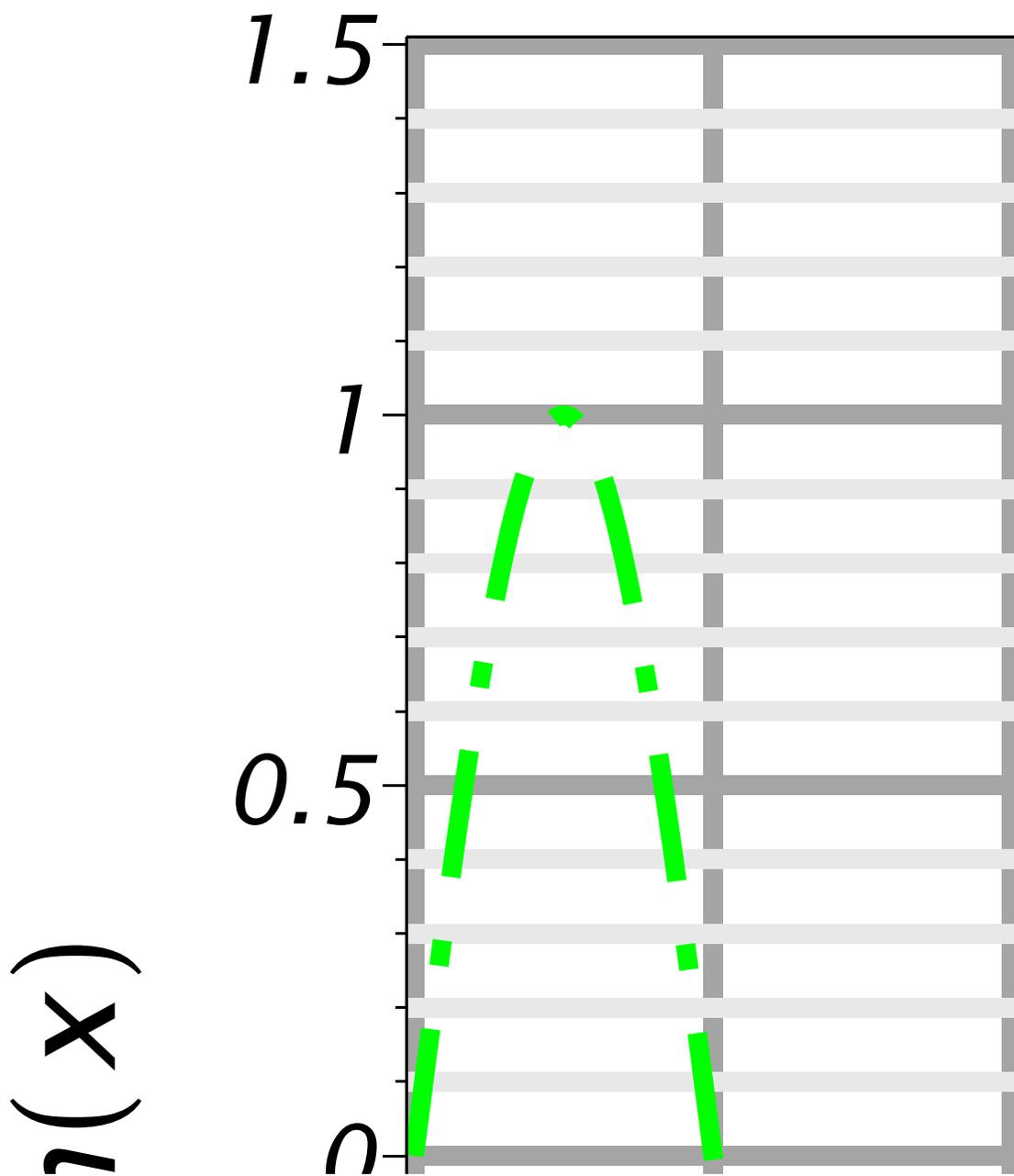
It has to be said that formatting and exporting plots in Maple can be awkward (hopefully it'll improve!), but with a bit of patience and effort it is possible to generate figures that aren't horrible.

```
> plot(sin(x), x = 0 .. 4 * Pi, axes = boxed, view = [0 .. 2 * Pi, -1.5 .. 1.5], labels = [typeset(x,
    "(radians)"), typeset(sin(x))], labeldirections = ["horizontal", "vertical"], title
    = typeset("Plot of ", sin(x), " vs ", sqrt(x^2)), linestyle = dashdot, thickness = 8, tickmarks
```

= [*spacing*( $\pi$ ), *default*], *colour* = *green*, *font* = [*Times, Italics*, 42], *axesfont* = [*Helvetica*, 30], *labelfont* = [*Courier*, 42], *axis* = [*gridlines* = [*thickness* = 8]]);

# *Plot of $\sin(x)$ vs*

$$\sqrt{x^2}$$



Note that in the pdf-version of this document, the large plot will look ridiculous. If you open the actual Maple file it will look okay.

