
Plotting Curves

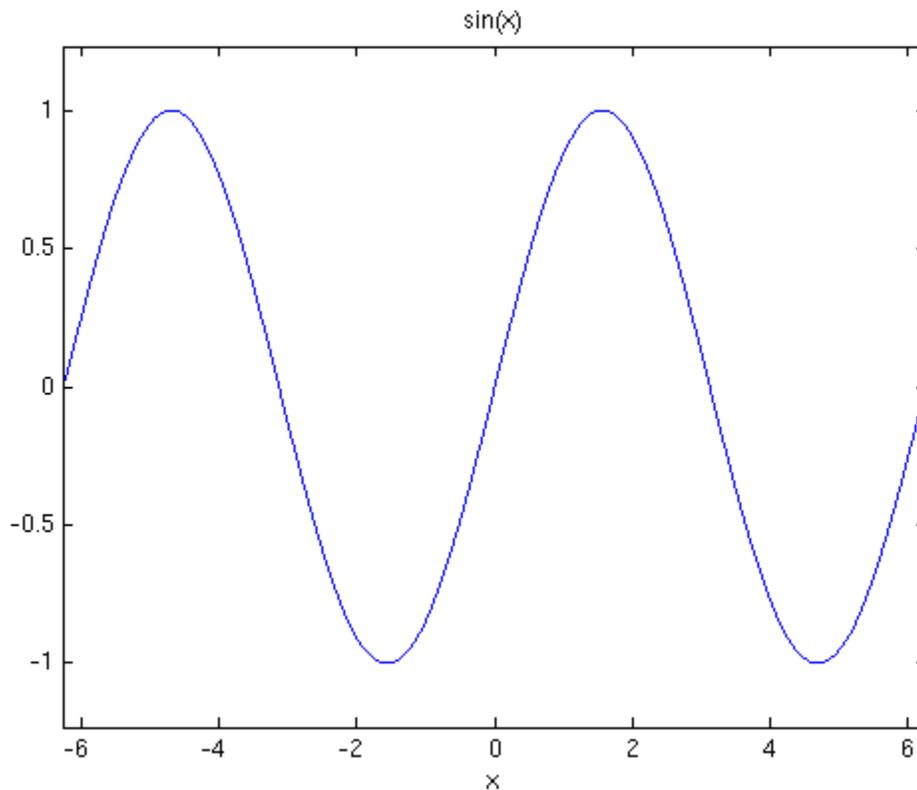
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Using `ezplot`

A picture is worth 1000 words. Let's learn how to get Matlab to show us some graphs. The easiest way is to use a command called `ezplot`. Suppose you want to draw the graph of the function $f(x) = \sin(x)$ over the interval from $-\pi$ to π . Try typing the following command:

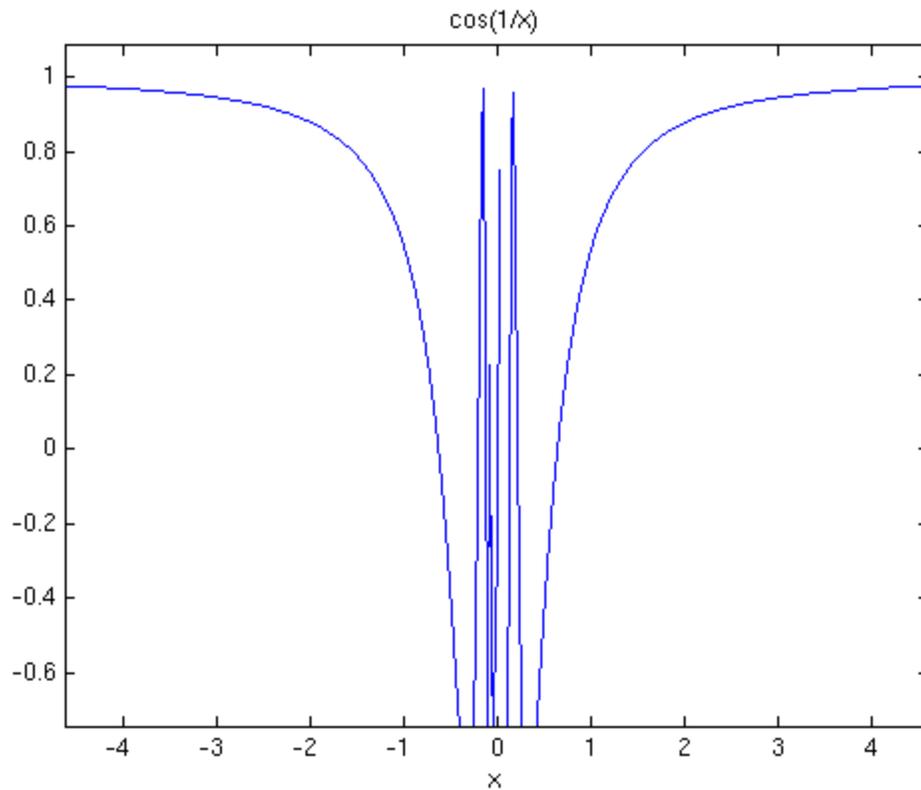
```
syms x
ezplot(sin(x))
```



This will also work with a symbolic function:

```
syms f(x)
```

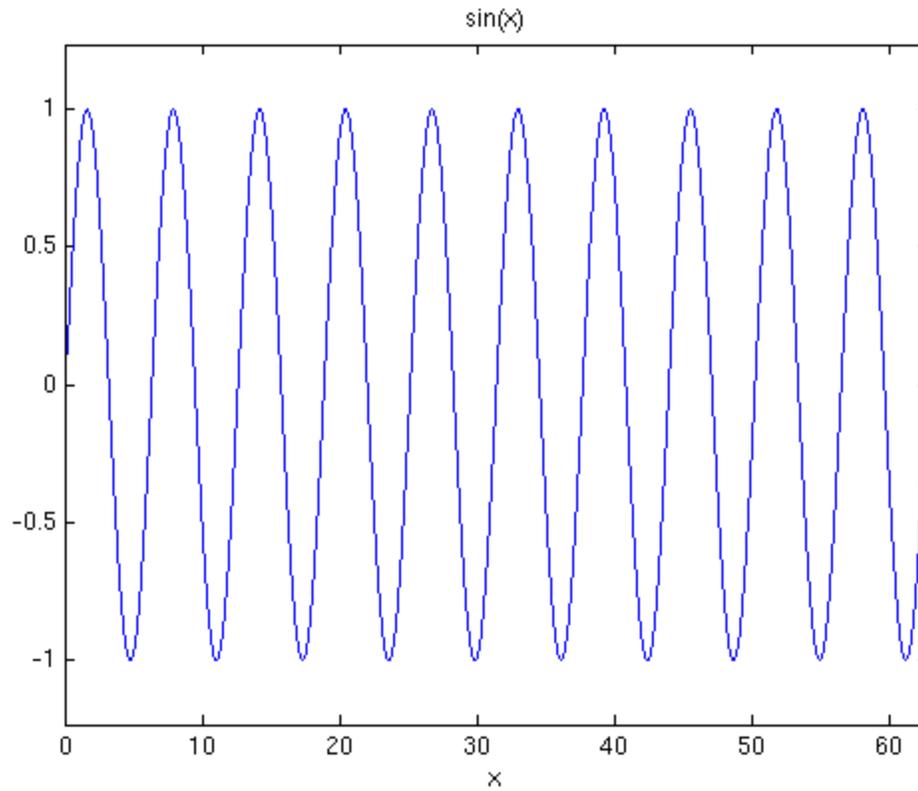
```
f(x) = cos(1/x);  
ezplot(f(x))
```



Changing the Window Domain

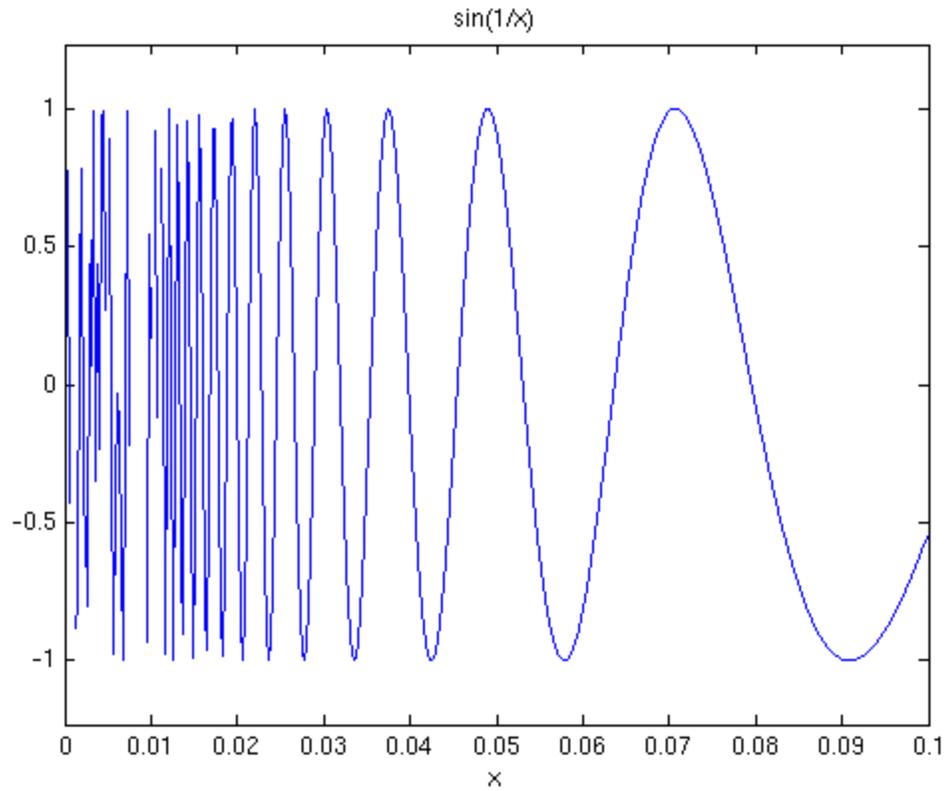
Matlab tries to make a reasonable choice of how much of the function to show. It often gives quite a good result. If you prefer you can tell it what domain to plot.

```
ezplot(sin(x), [0, 20*pi])
```



How about this one:

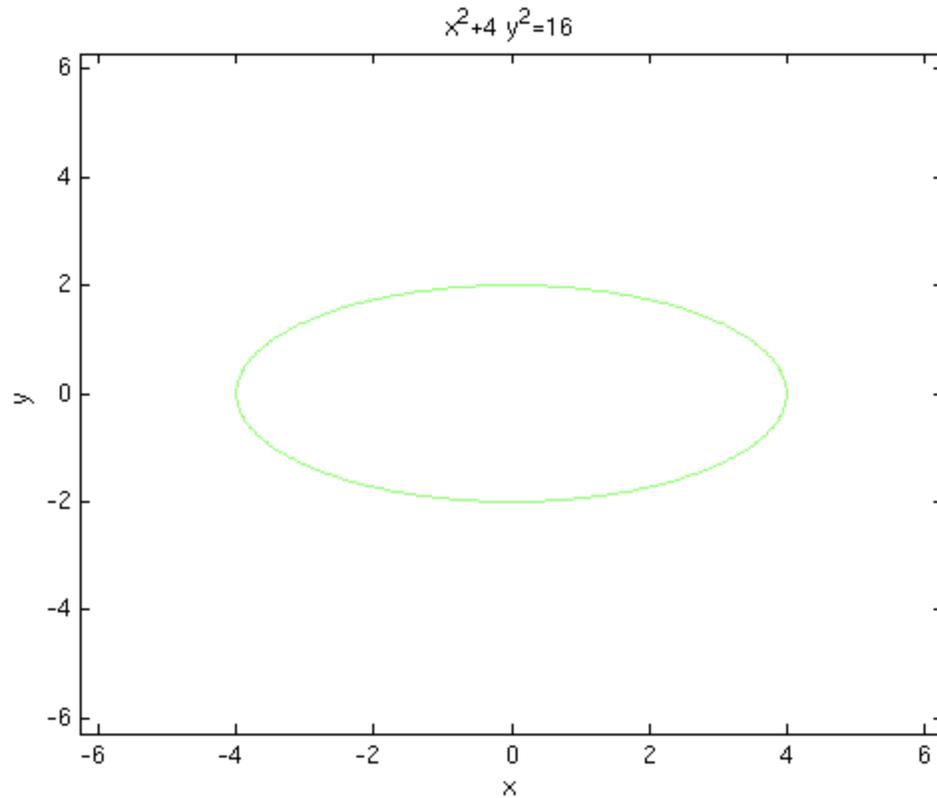
```
ezplot(sin(1/x), [0, 0.1])
```



Equations

Just so you know, ezplot can do equations, too.

```
syms x y
ezplot('x^2+4*y^2=16')
```



An Alternate Command

There is an alternative function called `plot` that gives you much more flexibility and options with your graphs, but it is a bit more advanced. If you'd like to learn about `plot`, try reading the Matlab help entry. For now, `ezplot` is all we'll need.

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