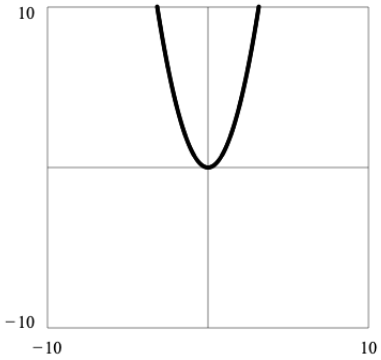
Draw

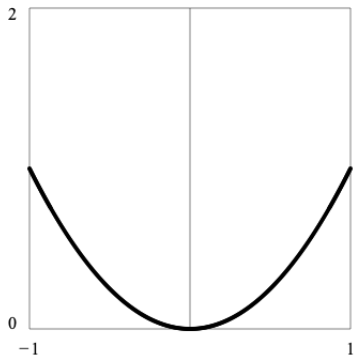
`draw(f,x)` draws a graph of function f of x.

```
draw(x^2,x)
```



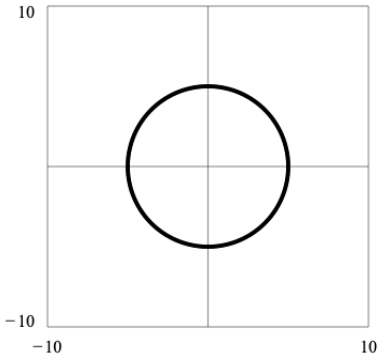
The vectors `xrange` and `yrange` control the scale of the graph.

```
xrange = (-1,1)
yrange = (0,2)
draw(x^2)
```



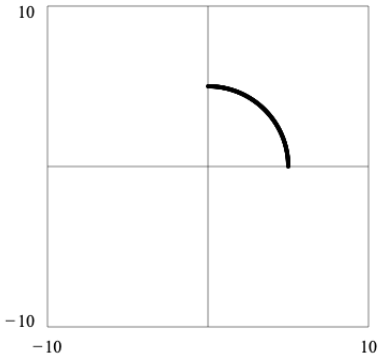
Parametric drawing occurs when a function returns a vector. The vector `trange` controls the parametric range. The default is `trange=(-pi,pi)`. In the following example, `draw` varies `theta` over the default range $-\pi$ to $+\pi$.

```
xrange = (-10,10)
yrange = (-10,10)
f = 5 (cos(theta),sin(theta))
draw(f,theta)
```



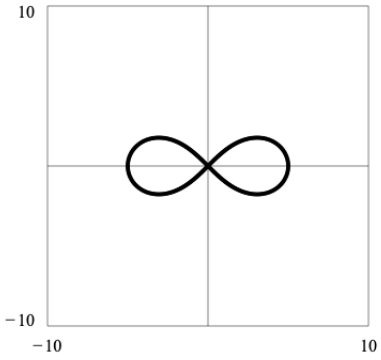
In the following example, `trange` is reduced to draw a quarter circle instead of a full circle.

```
trange = (0,pi/2)
f = 5 (cos(theta),sin(theta))
draw(f,theta)
```



Draw a lemniscate.

```
trange = (-pi,pi)
X = cos(t) / (1 + sin(t)^2)
Y = sin(t) cos(t) / (1 + sin(t)^2)
f = 5 (X,Y)
draw(f,t)
```



Draw a cardioid.

```
r = (1 + cos(t)) / 2
u = (cos(t),sin(t))
f = r u
xrange = (-1,1)
yrange = (-1,1)
trange = (0,2pi)
draw(f,t)
```