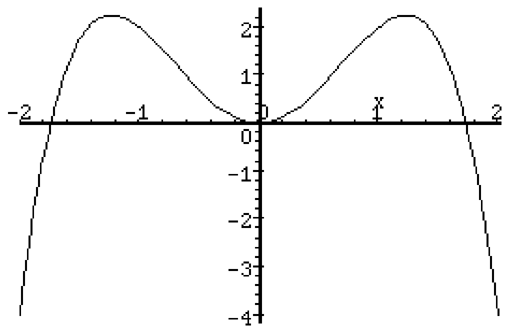
Plotting with Maple

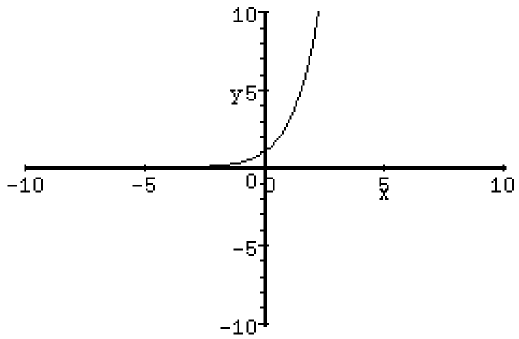
The basic plot command:

```
> plot( 3*x^2 - x^4, x = -2 .. 2 );
```



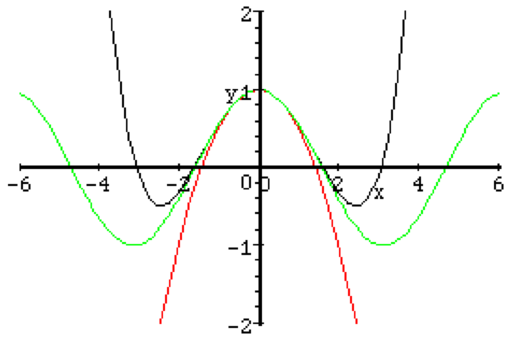
Add a restriction on the range:

```
> plot(exp(x), x=-10..10, y=-10..10);
```



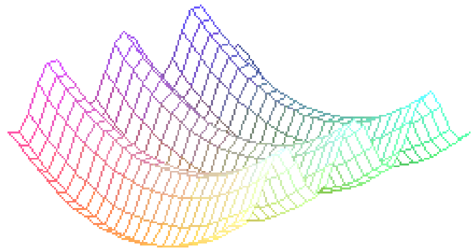
Plot several curves simultaneously:

```
> plot({cos(x), 1 - x^2/2, 1 - x^2/2 + x^4/24}, x=-6..6, y=-2..2);
```



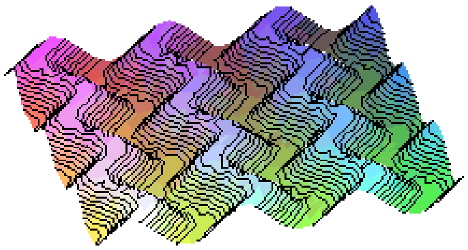
A basic 3D plot:

```
> plot3d( cos(x) + y^2/2, x=-10..10, y=-2..2);
```



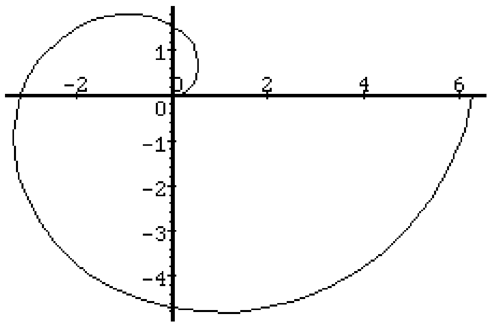
Add some options:

```
> plot3d( sin(x + sin(y)), x=-10..10, y=-10..10,
             scaling = constrained, style=patchcontour, orientation=[75,60]  );
```



Plot a parametric curve:

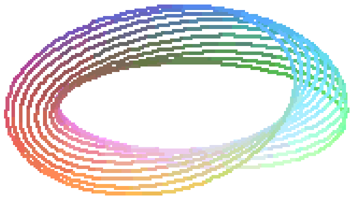
```
> plot( [ t*cos(t), t*sin(t), t = 0 .. 2*Pi ] );
```



The "plots" package contains specialized functions.

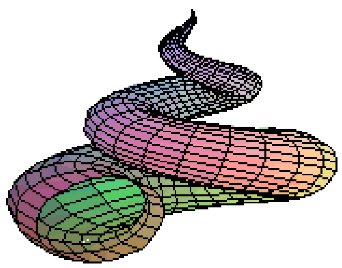
Plot a parametric curve in 3D, using the spacecurve function from the plots package:

```
> plots[spacecurve](
    [cos(1.05*t)*(10+2*sin(t)), sin(1.05*t)*(10+2*sin(t)), 2*cos(t),
       t=0..20*Pi], numpoints=2000, thickness=2, scaling=constrained);
```



A fancy 3D plot, using the tubeplot command from the plots package:

```
> with(plots):
>       f:= [(t-5*Pi)*sin(t)/3, (t-5*Pi)*cos(t)/3, (t-5*Pi)*.9, t=0 .. 5*Pi]:
>       Conchoid := tubeplot(f, radius = (t-5*Pi)*.2,
                       orientation = [37,81], tubepoints = 25, style=PATCH):
>       Conchoid;
```



This is one of many examples distributed with Maple.

Here’s another:

Stat/Math Center