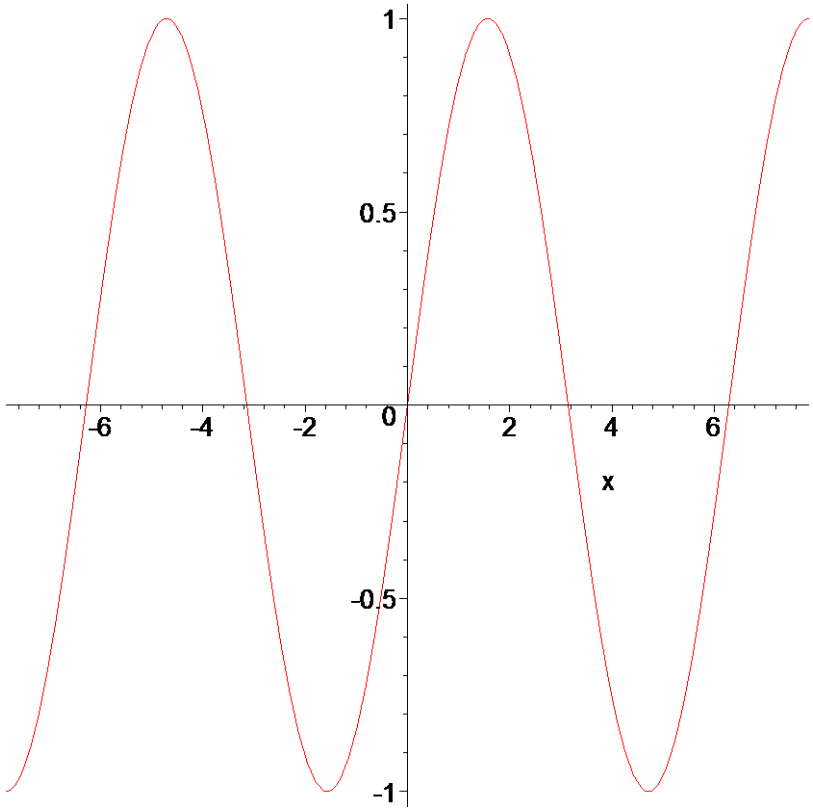
Introduction to Maple's 2D plotting facilities

See ?plot and related topics for full information

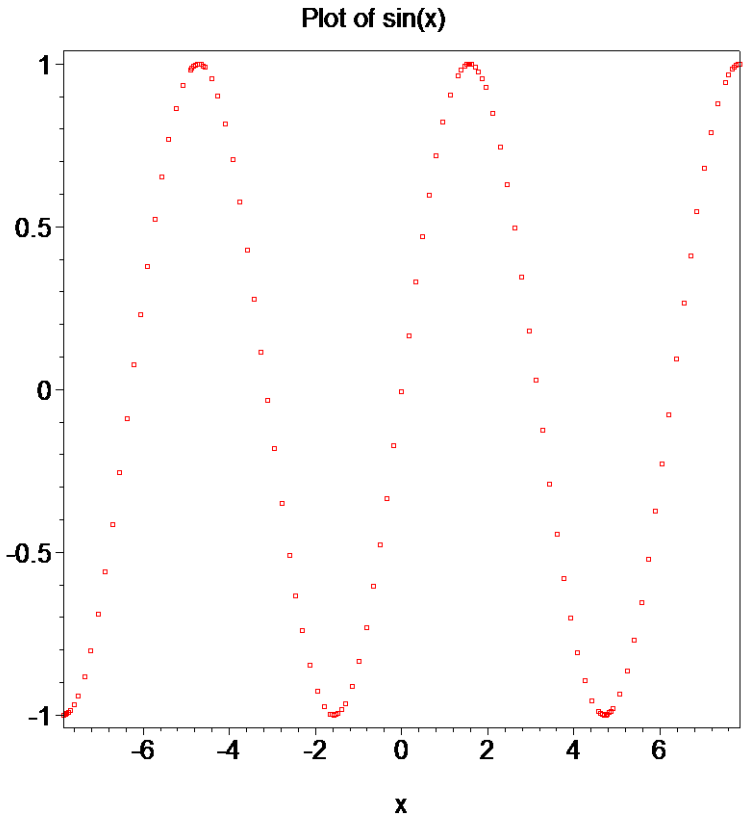
Generate a basic plot using a built-in mathematical function.
In such cases, Maple determines an appropriate "sampling density" in the independent variable to produce a smooth looking plot.

```
> plot(sin(x), x=-2.5*Pi..2.5*Pi);
```



Generate the same plot but this time use "point style" rather than "line style" and use a "box" for the plotting symbol. Also, add a title to the plot, and use "boxed" axes.

```
> plot(sin(x), x=-2.5*Pi..2.5*Pi, title="Plot of sin(x)",
>    style="point", symbol="box", axes="boxed");
```

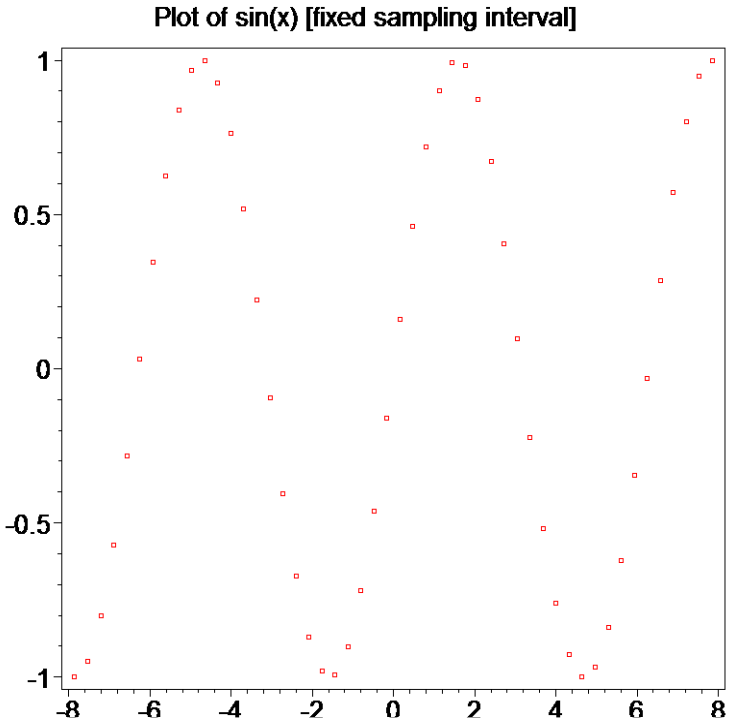


Generate some numeric values for x and sin(x) over the range -2.5*Pi to 2.5*Pi and plot as above. Note the difference in the appearance of the plots due to Maple's "adaptive" sampling of sin(x) in the first plot, versus the "uniform in x" sampling in the second plot.

```
> nx := 50;
```

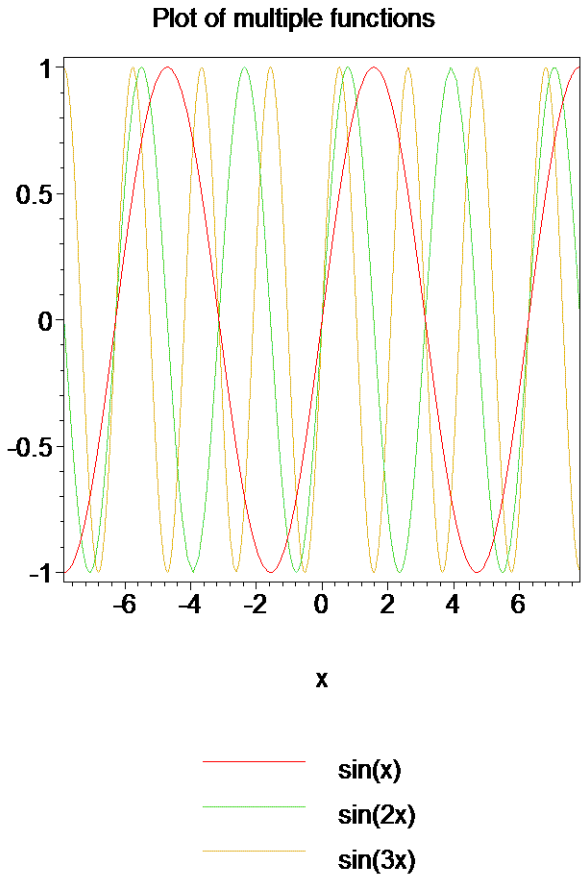
$$nx := 50$$

```
> vx := [seq(evalf(-2.5*Pi)..evalf(2.5*Pi), evalf(5.0*Pi/(nx -1)))]:
> vsinx := map(sin,vx):
> plot(vx, vsinx, title="Plot of sin(x) [fixed sampling interval]",
>     style="point", symbol="box", axes="boxed");
```



Generate a plot with multiple dependent variables, using line style (detault). Include a title and a legend.

```
> plot( [sin(x), sin(2*x), sin(3*x)], x=-2.5*Pi..2.5*Pi,axes=boxed,
>   title="Plot of multiple functions",
>   legend=["sin(x)", "sin(2x)", "sin(3x)"]);
>
```



Generate a plot of the area under the curve exp(-x^2) on the interval x = -10 .. x1, and with x1 ranging from -10 to 10. Note how Maple makes sense of all the occurrences of 'x', which would normally drive your calculus "nuts"!

```
> plot(int(exp(-x^2), x = -10..x), x = -10..10);
```