```
> plot3d( 4 - x^2 - y^2 , x=-2..2 , y=-2..2);
> plot( exp(-x)*sin(2*x), x=0..4 );
> int( sqrt( 1 - x^2) , x);
```

$$\frac{1}{2}\, x \sqrt{-x^2+1} + \frac{1}{2}\, \arcsin(x) \tag{1}$$

```
> int( exp(x^2), x );
```

$$-\frac{1}{2}\, \mathrm{I} \sqrt{\pi}\, \operatorname{erf}(\mathrm{I}\, x) \tag{2}$$

```
> int( exp(x^2), x=0..3);
```

$$-\frac{1}{2}\, \mathrm{I} \operatorname{erf}(3\,\mathrm{I})\, \sqrt{\pi} \tag{3}$$

```
> evalf( int( exp(x^2), x=0..3) );
```

$$1444.545124 \tag{4}$$

```
> diff( sqrt( tan(x) + x^2*exp(x)),x);   # comments can go after a
  pound sign
```

$$\frac{1}{2}\, \frac{1+\tan(x)^2+2\,x\,\mathrm{e}^x+x^2\,\mathrm{e}^x}{\sqrt{\tan(x)+x^2\,\mathrm{e}^x}} \tag{5}$$

```
> diff( sqrt( tan(x) + x^2*exp(x)), x$2 );   # differentiate 2
  times with respect to x
```

$$-\frac{1}{4}\, \frac{\left(1+\tan(x)^2+2\,x\,\mathrm{e}^x+x^2\,\mathrm{e}^x\right)^2}{\left(\tan(x)+x^2\,\mathrm{e}^x\right)^{3/2}} + \frac{1}{2}\, \frac{2\tan(x)\left(1+\tan(x)^2\right)+2\,\mathrm{e}^x+4\,x\,\mathrm{e}^x+x^2\,\mathrm{e}^x}{\sqrt{\tan(x)+x^2\,\mathrm{e}^x}} \tag{6}$$