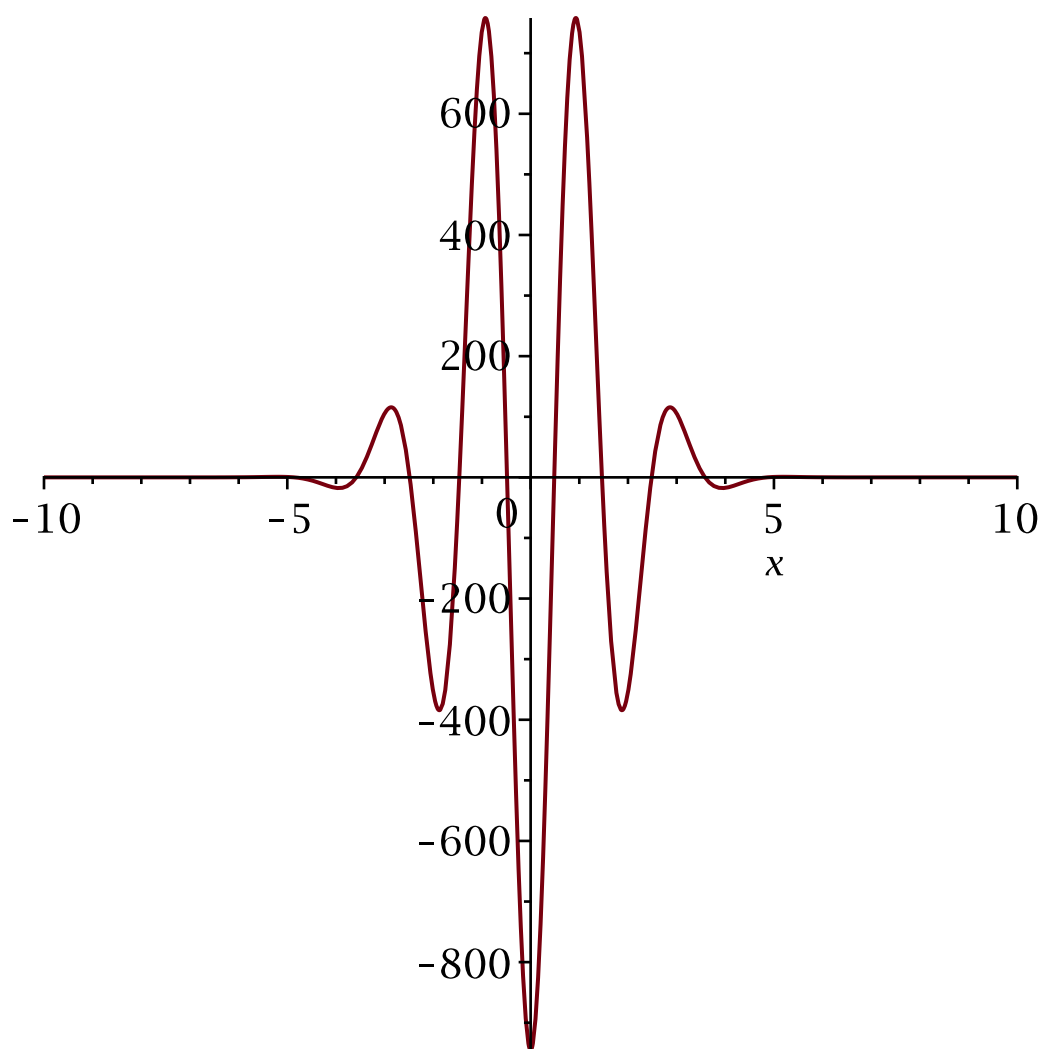


> derivative($\exp\left(-\frac{x^2}{2}\right)$)	$\text{derivative}\left(e^{-\frac{x^2}{2}}\right)$	(1)
> $f(x) := \exp\left(-\frac{x^2}{2}\right)$	$f := x \rightarrow e^{-\frac{1}{2} x^2}$	(2)
> derivative(f, x)	$\text{derivative}(f, x)$	(3)
> diff(f, x)	0	(4)
> x	x	(5)
> $\frac{d}{dx} f(x)$	$-x e^{-\frac{x^2}{2}}$	(6)
> $\frac{d}{dx} f(x)$	$\frac{d e^{-\frac{x^2}{2}}}{dx}$	(7)
> Diff(f(x), x)	$\frac{d}{dx} e^{-\frac{x^2}{2}}$	(8)
> diff(f, x)	0	(9)
> diff(f(x), x)	$-x e^{-\frac{x^2}{2}}$	(10)
> diff(f(x), x\$10)	$-945 e^{-\frac{x^2}{2}} + 4725 x^2 e^{-\frac{x^2}{2}} - 3150 x^4 e^{-\frac{x^2}{2}} + 630 x^6 e^{-\frac{x^2}{2}} - 45 x^8 e^{-\frac{x^2}{2}} + x^{10} e^{-\frac{x^2}{2}}$	(11)
> plot(diff(f(x), x\$10))		



```
> diff(f, x)
```

0

(12)

```
> diff(f(x), x)
```

$-x e^{-\frac{x^2}{2}}$

(13)

```
> implicitplot(x2 + y2 = 1, x = -1 .. 1, y = -1 .. 1)
```

$\text{implicitplot}(x^2 + y^2 = 1, x = -1 .. 1, y = -1 .. 1)$

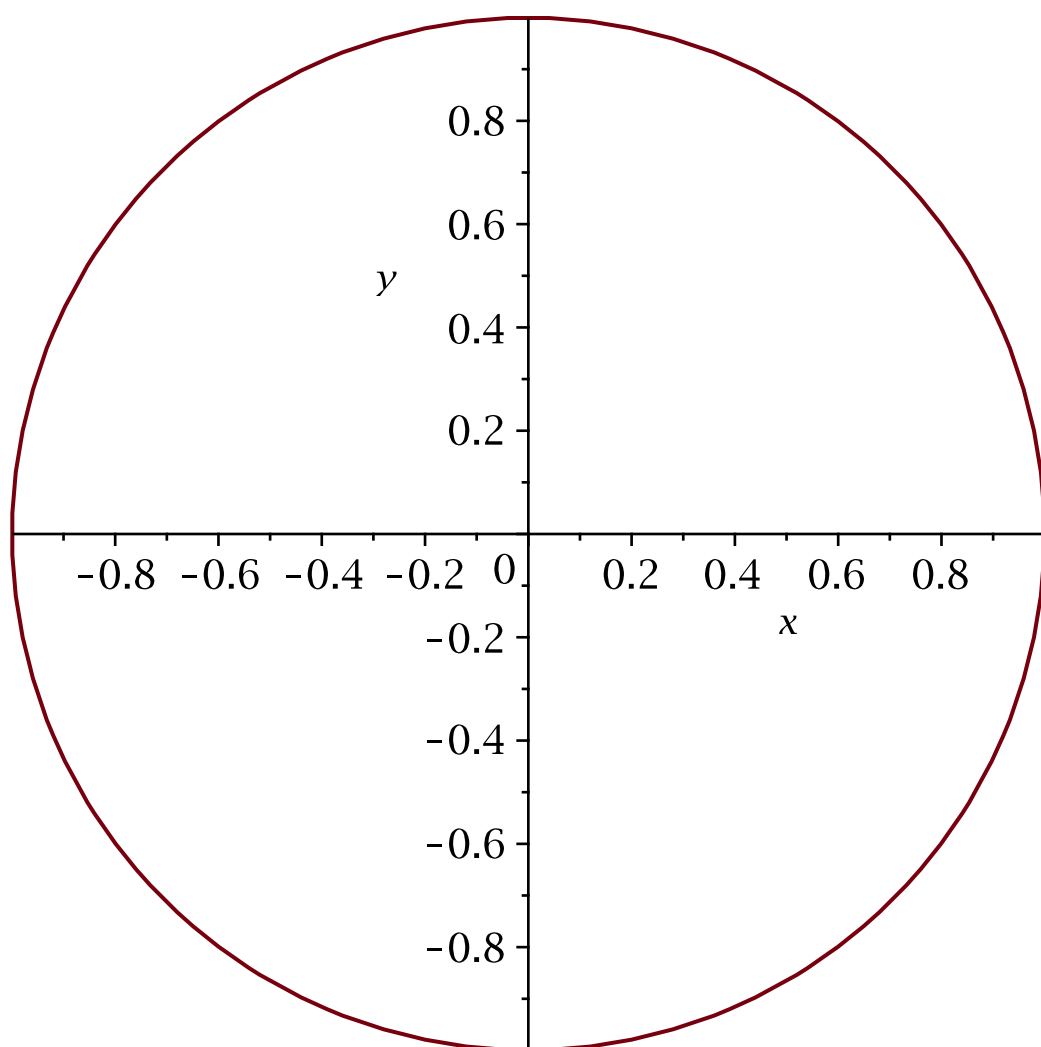
(14)

```
> with(plots, implicitplot)
```

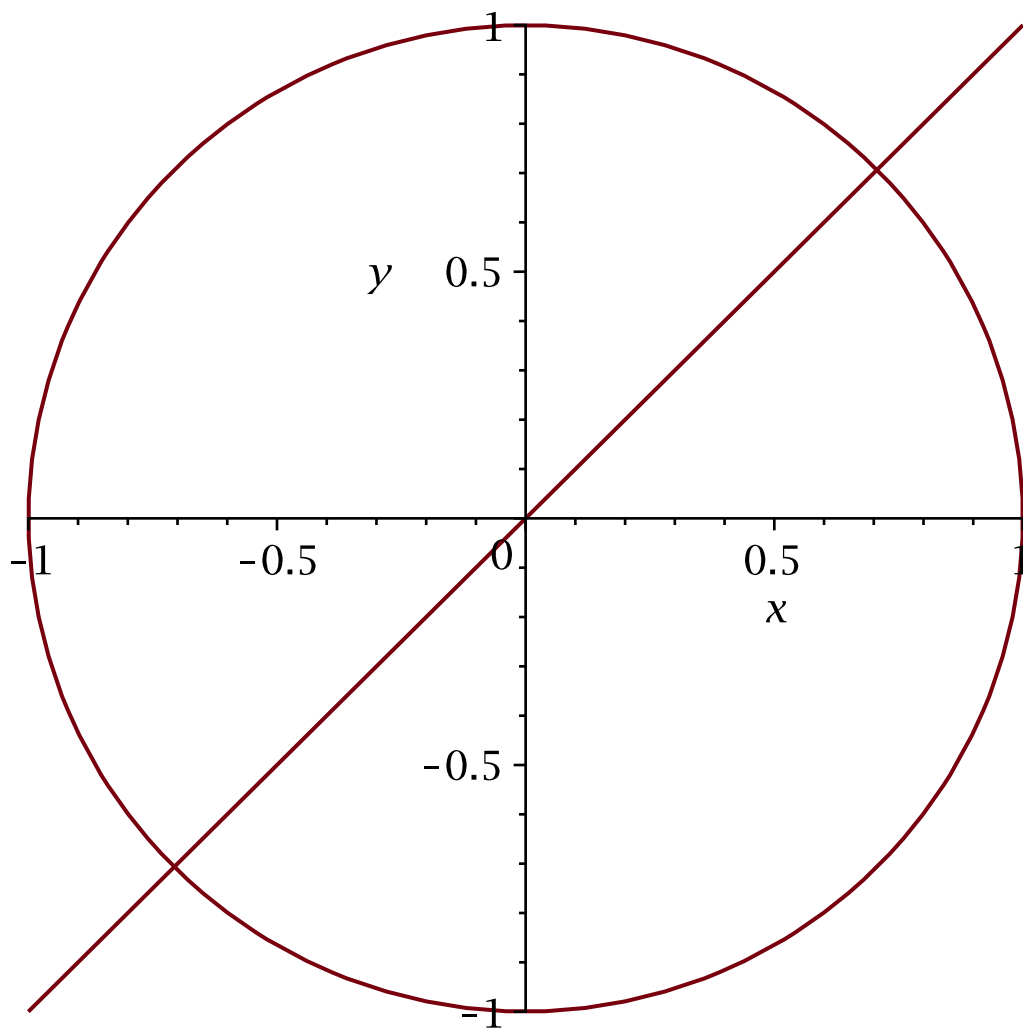
$[\text{implicitplot}]$

(15)

```
> implicitplot(x2 + y2 = 1, x = -1 .. 1, y = -1 .. 1)
```



=
> `implicitplot([$x^2 + y^2 = 1$, $y = x$], $x = -1..1$, $y = -1..1$)`

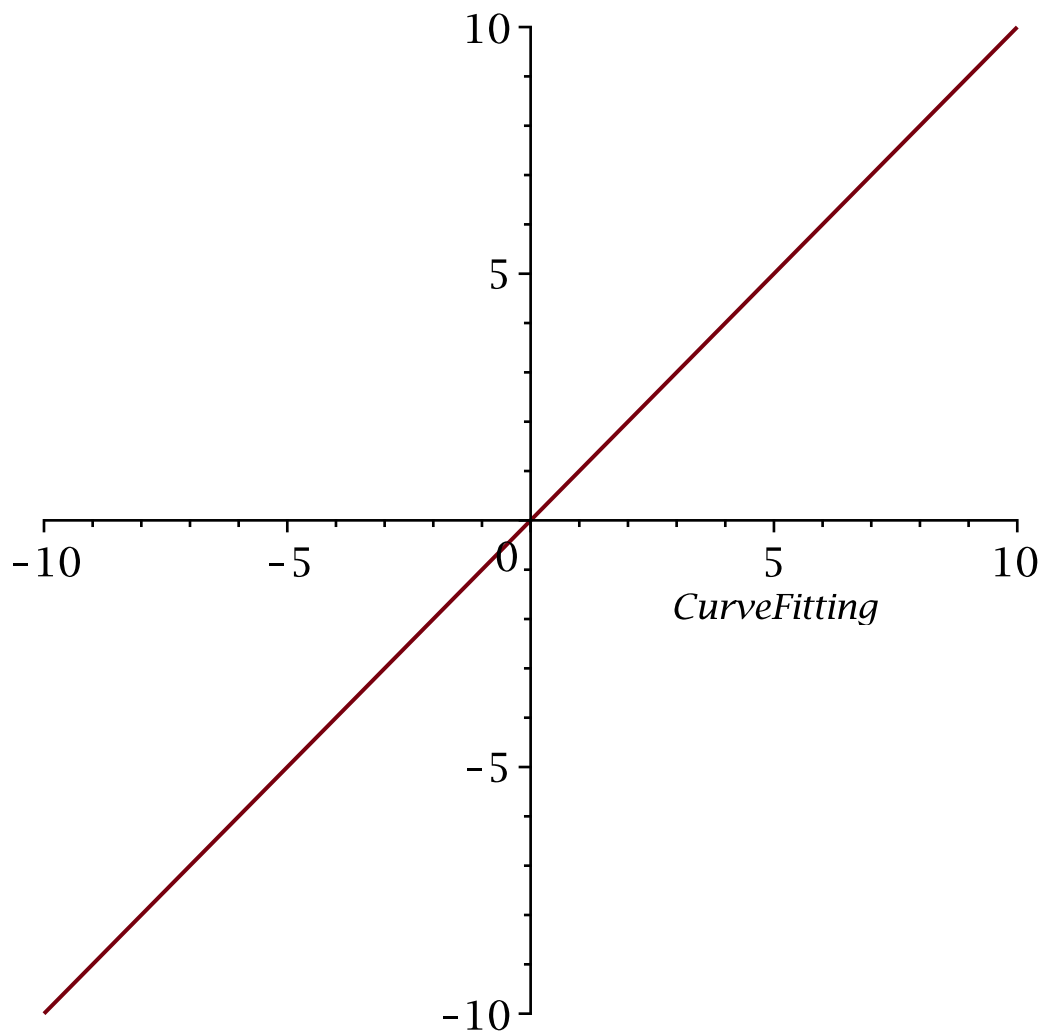


```
> e2 := [0, 10, 20, 30, 40, 50, 60, 70, 80, 90, 100]
      e2 := [0, 10, 20, 30, 40, 50, 60, 70, 80, 90, 100] (16)
```

```
> e3 := [0, 1.89, 2.88, 3.78, 4.64, 5.47, 6.29, 7.10, 7.92, 8.75, 9.58]
      e3 := [0, 1.89, 2.88, 3.78, 4.64, 5.47, 6.29, 7.10, 7.92, 8.75, 9.58] (17)
```

```
> e4 := CurveFitting:Spline(e2, e3, x)
      Spline([10, 20, 30, 40, 50, 60, 70, 80, 90, 100], e3, x) (18)
```

```
> plot(e4)
```

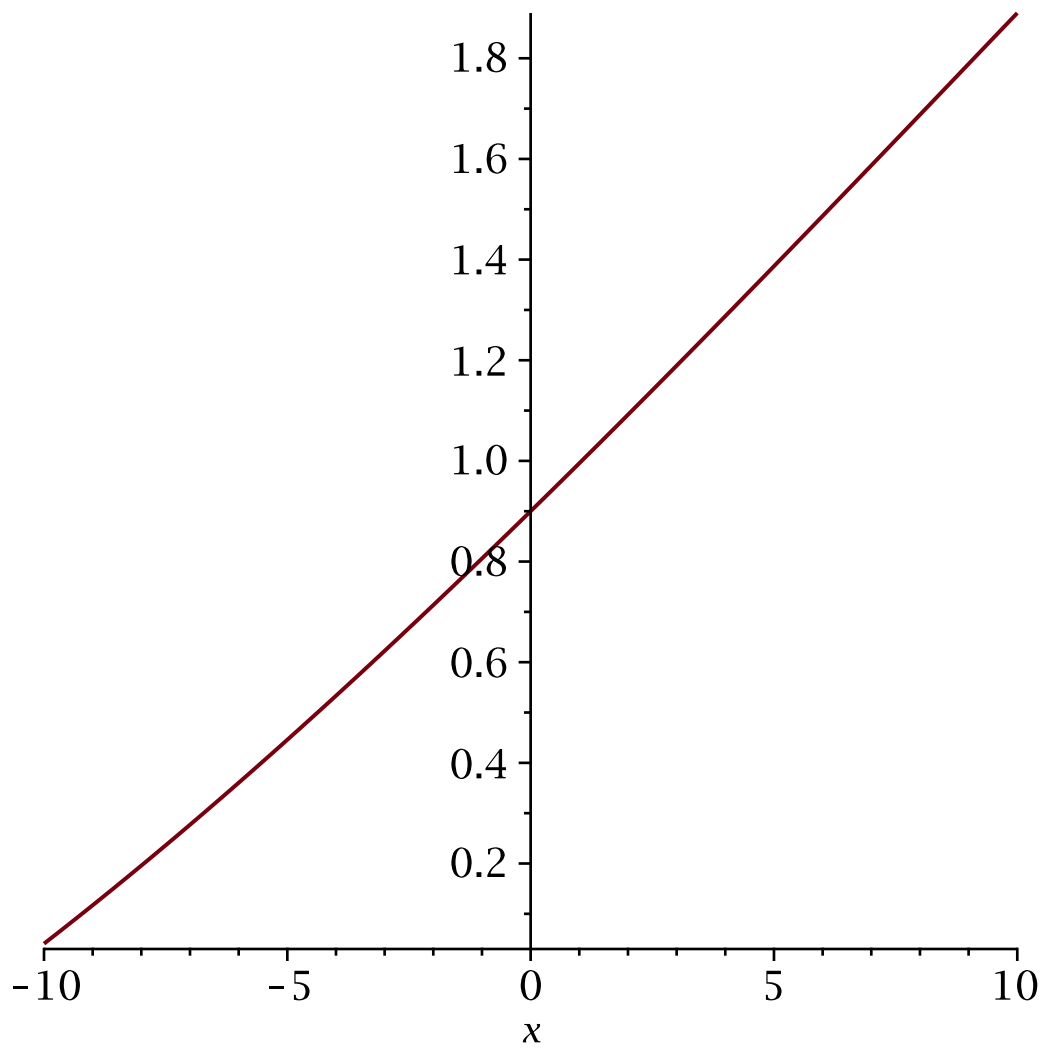


```
> Spline(e2, e3)
      Spline([10, 20, 30, 40, 50, 60, 70, 80, 90, 100], e3) (19)
```

```
> with(CurveFitting)
[ArrayInterpolation, BSpline, BSplineCurve, Interactive, LeastSquares, Lowess, (20)
 PolynomialInterpolation, RationalInterpolation, Spline, ThieleInterpolation]
```

```
> f(x) := Spline(e2, e3, x)
      f := x → CurveFitting:-Spline(e2, e3, x) (21)
```

```
> plot(f(x))
```

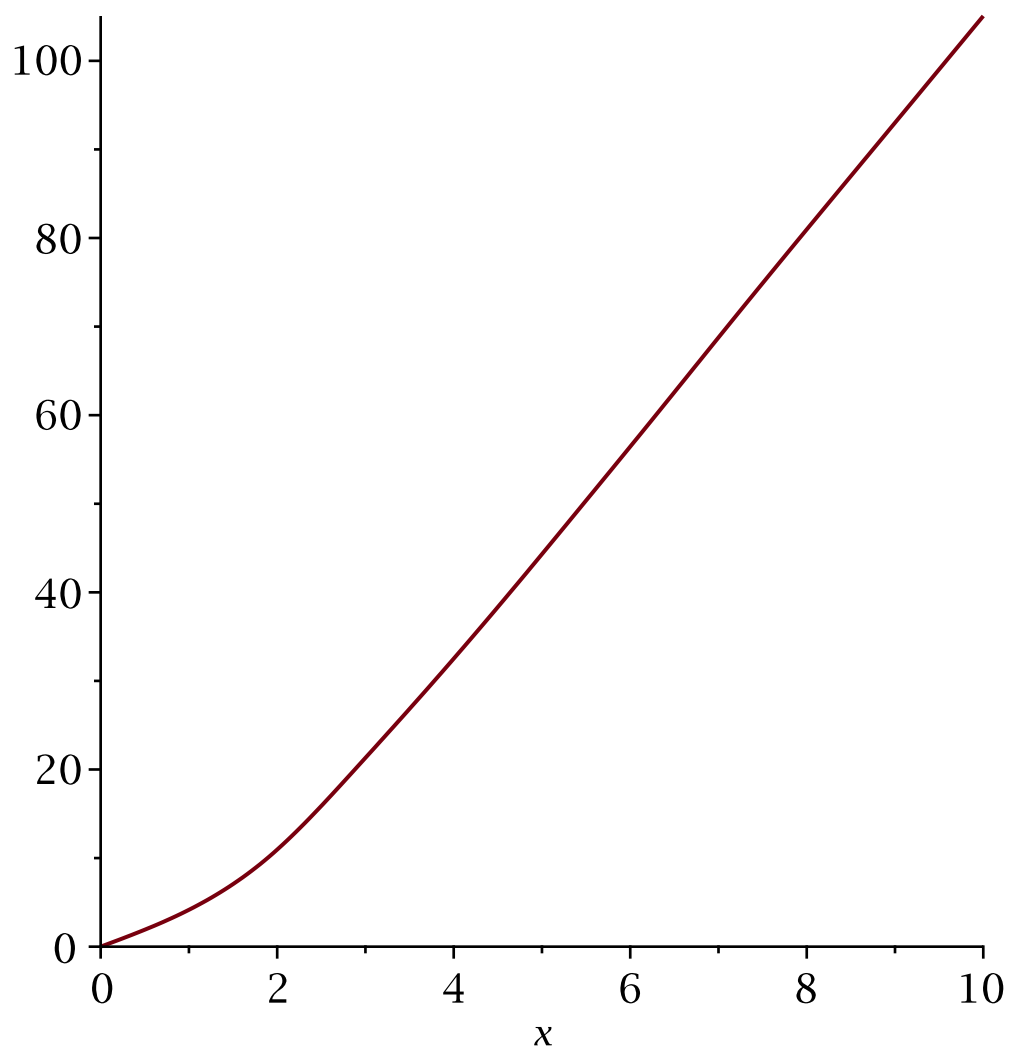


> $f(x) := \text{Spline}(e3, e2, x)$

$f := x \rightarrow \text{CurveFitting}:-\text{Spline}(e3, e2, x)$

> $\text{plot}(f(x), x = 0..10)$

(22)



```
> plot(diff(f(x), x), x = 0..10)
```

