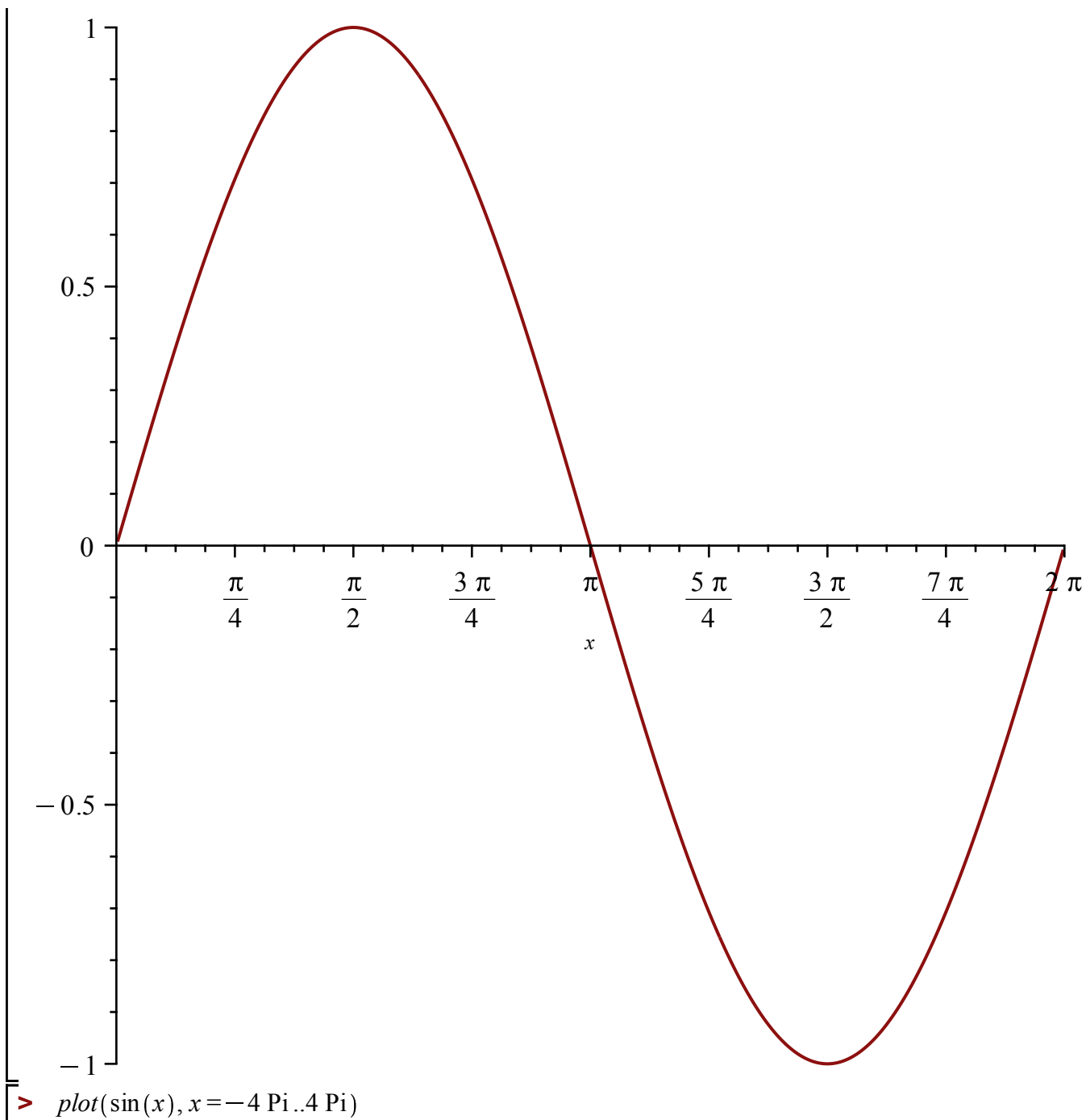
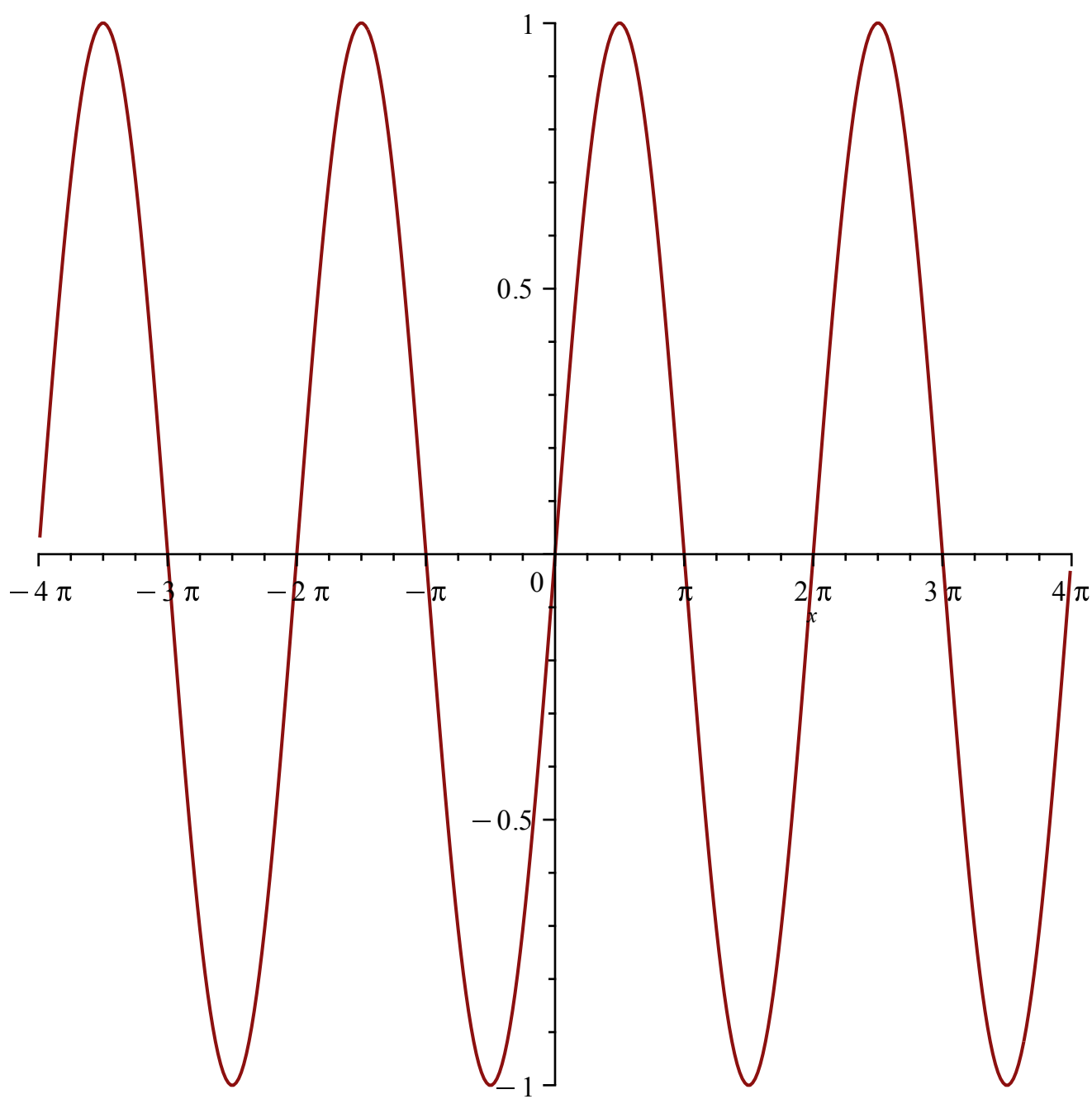


> evalf( $\frac{1}{2}$ )	0.5000000000	(1)
> evalf(exp(1))	2.718281828	(2)
> evalf(sqrt(3))	1.732050808	(3)
> evalf(Pi)	3.141592654	(4)
> expr := (x^2 + 2·x + 1)·(x^2 - 1)	expr := (x <sup>2</sup> + 2 x + 1) (x <sup>2</sup> - 1)	(5)
> expand(expr)	x <sup>4</sup> + 2 x <sup>3</sup> - 2 x - 1	(6)
> expr := (x + n)^5	expr := (x + n) <sup>5</sup>	(7)
> expand(expr)	n <sup>5</sup> + 5 n <sup>4</sup> x + 10 n <sup>3</sup> x <sup>2</sup> + 10 n <sup>2</sup> x <sup>3</sup> + 5 n x <sup>4</sup> + x <sup>5</sup>	(8)
> expr := 'expr'	expr := expr	(9)
> factor(x^8 - 1)	(x - 1) (x + 1) (x <sup>2</sup> + 1) (x <sup>4</sup> + 1)	(10)
> a := factor( $\frac{(2 \cdot x^2)}{x^3 - 1}$ )	a := $\frac{2 x^2}{(x - 1) (x^2 + x + 1)}$	(11)
> b := factor( $\frac{3 \cdot x}{x^2 - 1}$ )	b := $\frac{3 x}{(x - 1) (x + 1)}$	(12)
> a + b	$\frac{2 x^2}{(x - 1) (x^2 + x + 1)} + \frac{3 x}{(x - 1) (x + 1)}$	(13)
> factor(a + b)	$\frac{x (5 x^2 + 5 x + 3)}{(x - 1) (x^2 + x + 1) (x + 1)}$	(14)
> simplify(cos(x)^2 + sin(x)^2, trig)	1	(15)
> simplify(cos(x)^2 + sin(x)^2)	1	(16)

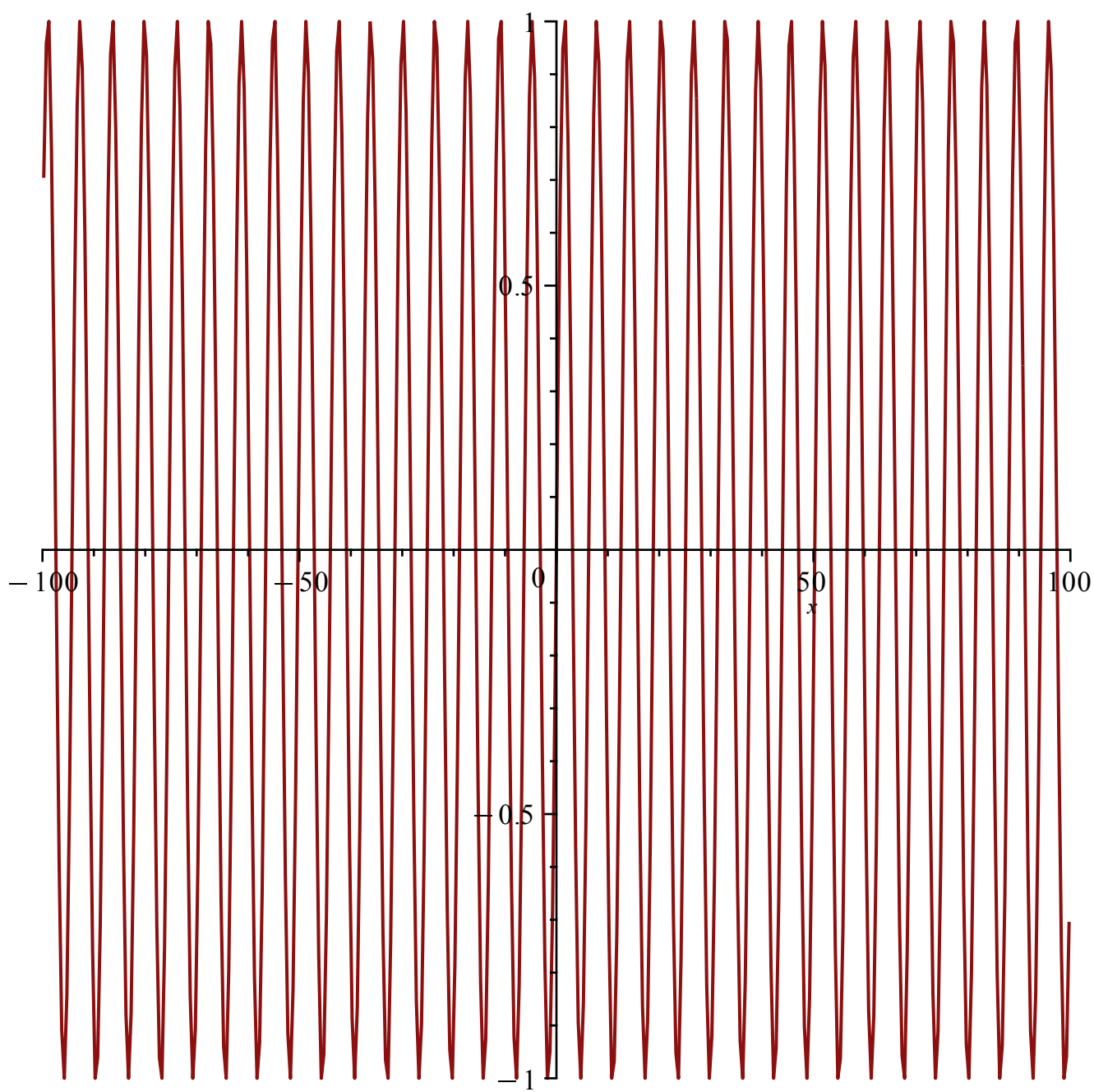
>	$expr := \exp(x) + \ln(x)$			
=		$expr := e^x + \ln(x)$		(17)
>	$eval(expr, x = 1)$			
=		$e$		(18)
>	$subs(x = 1, expr)$			
=		$e + \ln(1)$		(19)
>	$expr := (x^2 - 4 \cdot x + 3) = 0$			
=		$expr := x^2 - 4x + 3 = 0$		(20)
>	$solve(expr, x)$			
=		$3, 1$		(21)
>	$solve(x^2 \cdot y + 2 \cdot y - x = 0, y)$			
=		$\frac{x}{x^2 + 2}$		(22)
>	$solve(x^2 \cdot y + 2 \cdot y - x = 0, x)$			
=		$\frac{1 + \sqrt{-8y^2 + 1}}{2y}, -\frac{-1 + \sqrt{-8y^2 + 1}}{2y}$		(23)
>	$fsolve(x - \cos(x) = 0, x)$			
=		$0.7390851332$		(24)
>	$fsolve(x^5 - 3 \cdot x^3 - 1 = 0, x)$			
=		$-1.668777593, -0.7418139305, 1.782308780$		(25)
>	$eq1 := 4x + 3y = 10$			
=		$eq1 := 4x + 3y = 10$		(26)
>	$eq2 := 3x - y = 1$			
=		$eq2 := 3x - y = 1$		(27)
>	$solve(\{eq1, eq2\}, \{x, y\})$			
=		$\{x = 1, y = 2\}$		(28)
>	$f := x \rightarrow \exp(x) - \sin(x)$			
=		$f := x \mapsto e^x - \sin(x)$		(29)
>	$f(0)$			
=		$1$		(30)
>	$f(-1)$			
=		$e^{-1} + \sin(1)$		(31)
>	$eval(f(-1))$			
=		$e^{-1} + \sin(1)$		(32)
>	$\sin(0)$			
=		$0$		(33)
>	$\sin(1)$			
=		$\sin(1)$		(34)
>	$D(f)(0)$			
=				(35)

	0	(35)
> D(f) (-1)	$e^{-1} - \cos(1)$	(36)
> D(f) (x)	$e^x - \cos(x)$	(37)
> (D@@2)(f) (x)	$e^x + \sin(x)$	(38)
> diff(f(x), x)	$e^x - \cos(x)$	(39)
> diff(f(x), x\$2)	$e^x + \sin(x)$	(40)
> int(f(x), x)	$\cos(x) + e^x$	(41)
> int(f(x), x=-1..1)	$-e^{-1} + e$	(42)
> f:=f'	$f := f$	(43)
> g := exp(x) - sin(x)	$g := e^x - \sin(x)$	(44)
> eval(g, x=0)	1	(45)
> diff(g, x)	$e^x - \cos(x)$	(46)
> int(g, x)	$\cos(x) + e^x$	(47)
> int(g, x=-1..1)	$-e^{-1} + e$	(48)
> f:= diff(g, x\$2)	$f := e^x + \sin(x)$	(49)
> limit( $\frac{\sin(x)}{x}$ , x=0)	1	(50)
> limit( $\frac{(\cos(x) + 1)}{x - \text{Pi}}$ , x=Pi)	0	(51)
> plot(sin(x), x=0..2 Pi)		

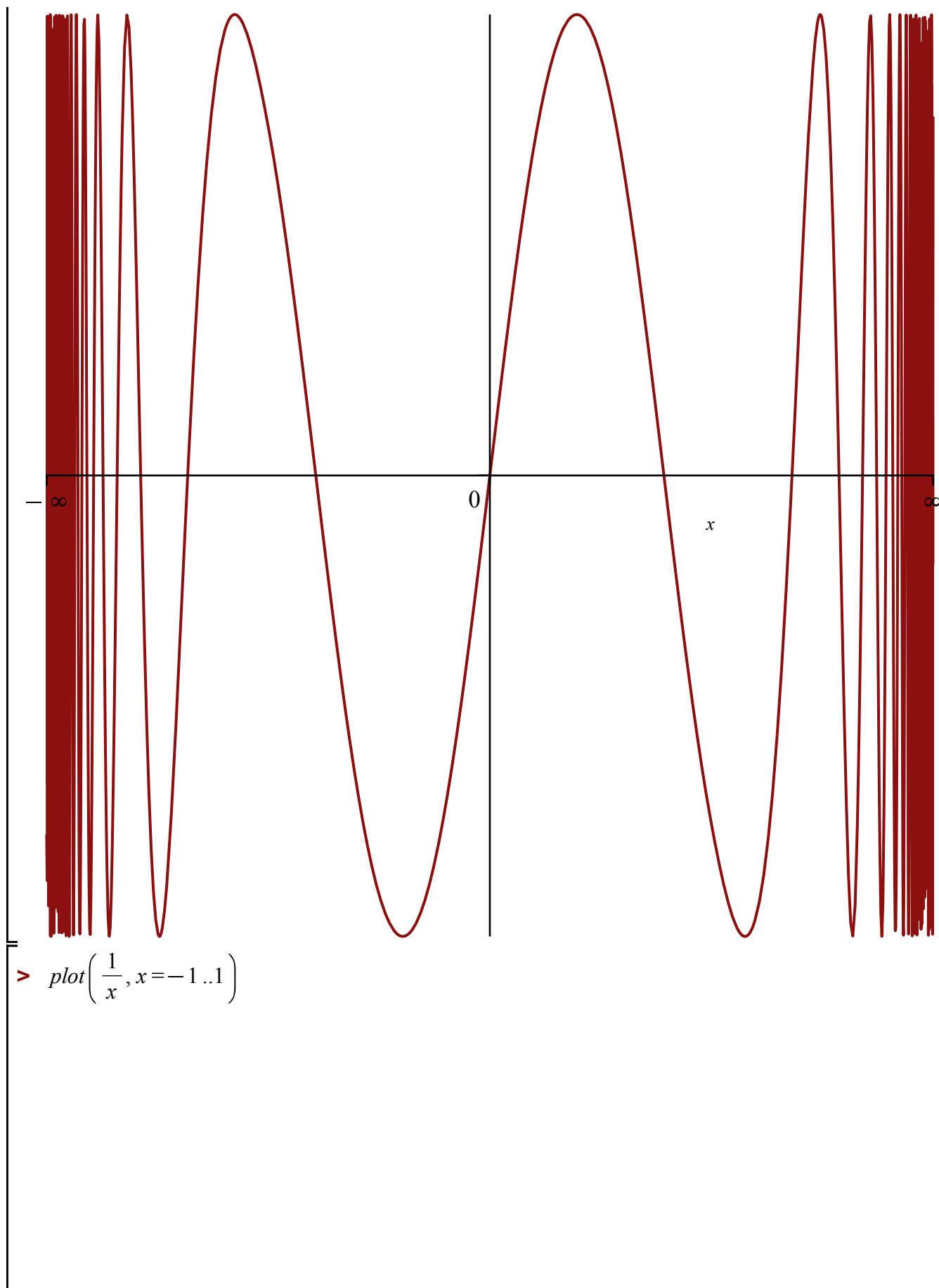


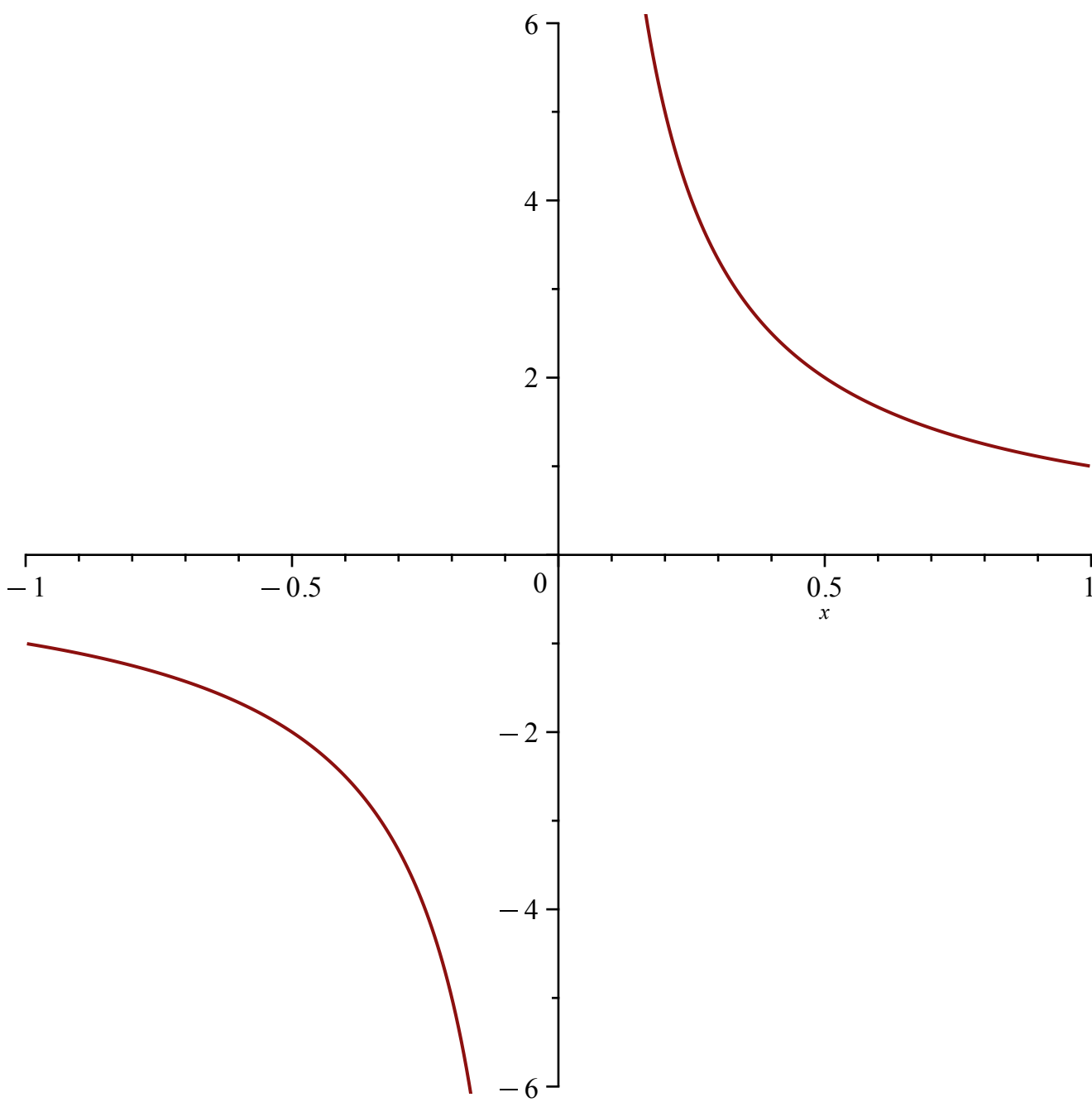


```
> plot(sin(x), x = -100 .. 100)
```



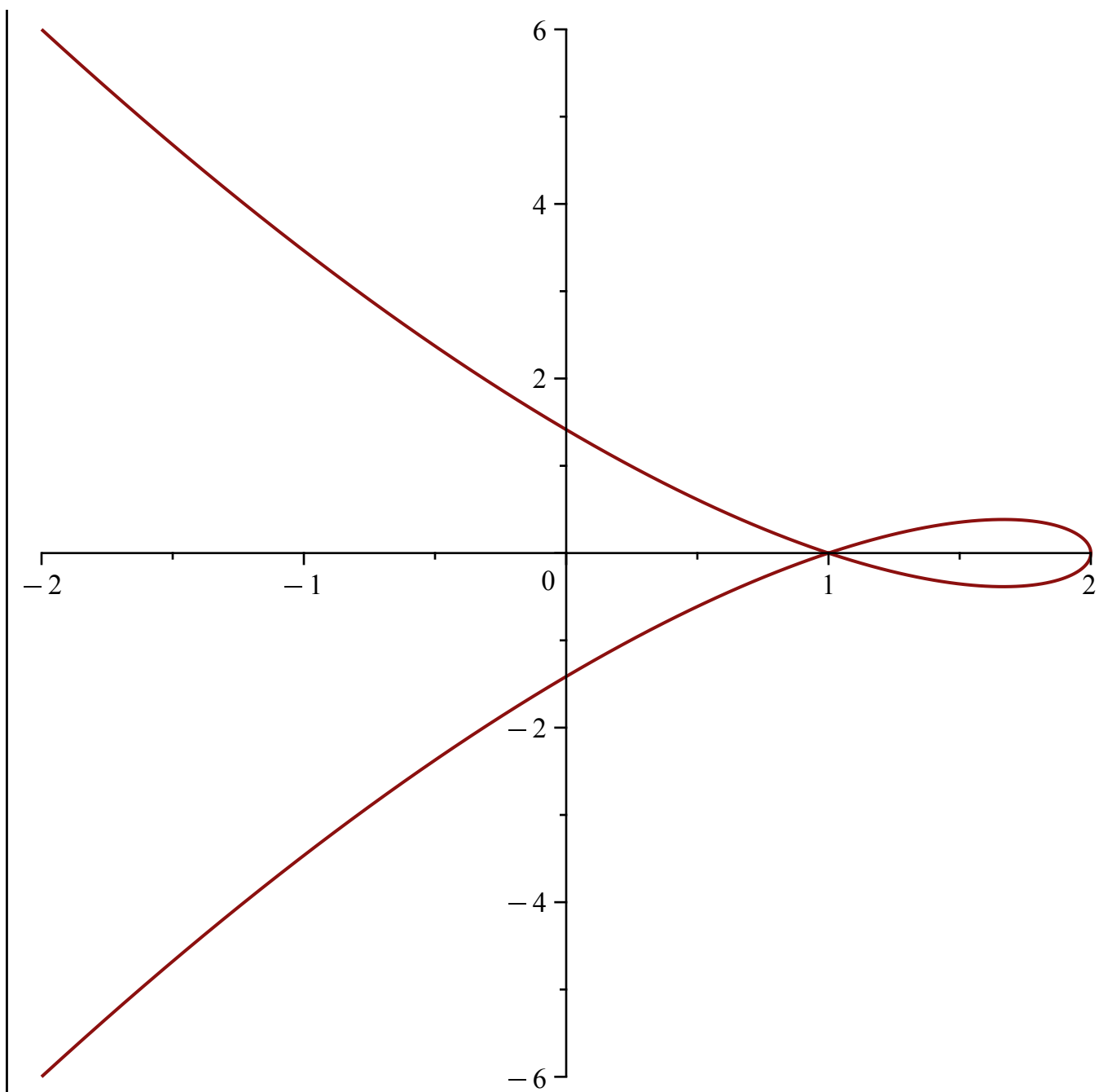
```
> plot(sin(x), x = -infinity ..infinity)
```



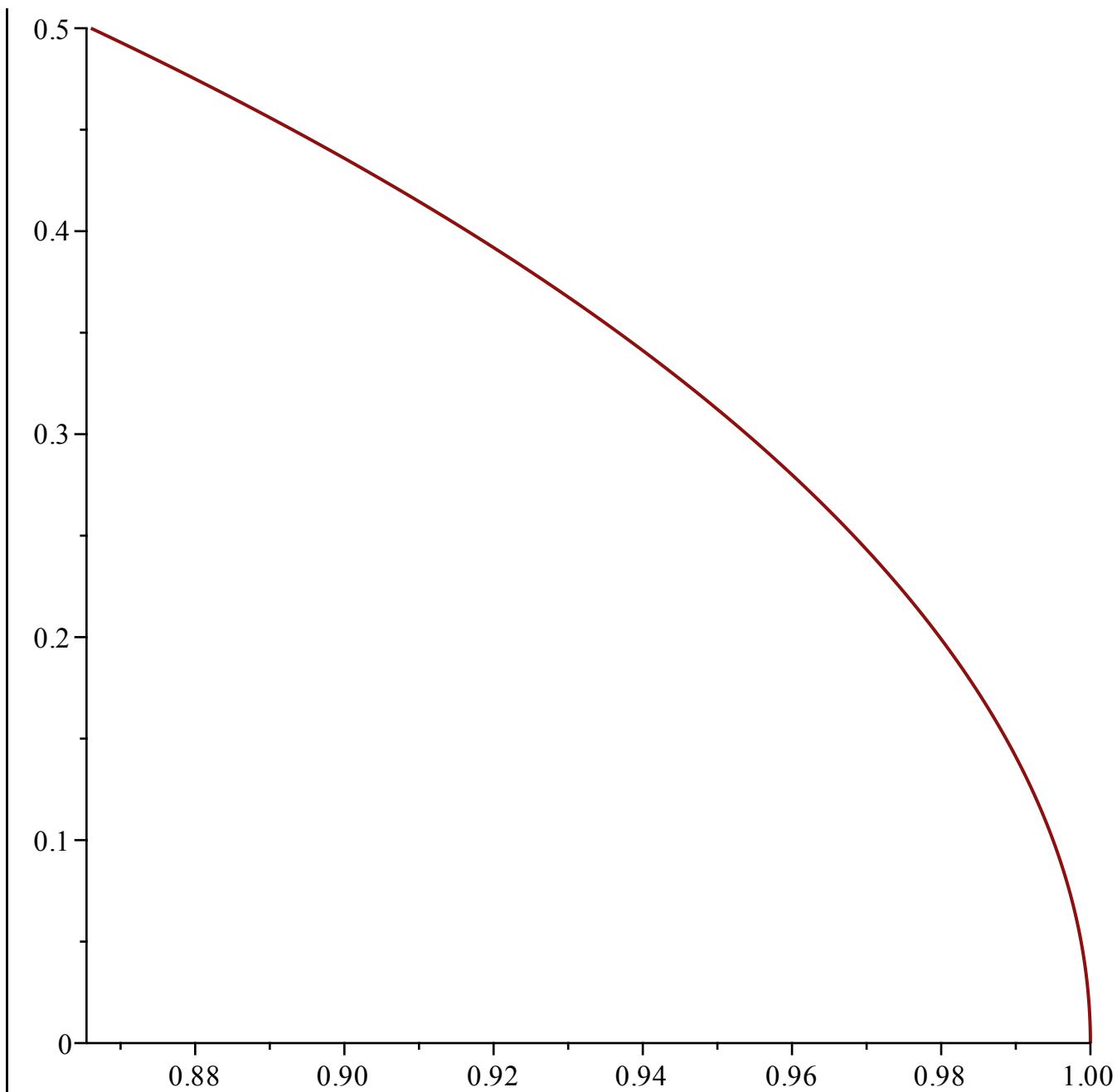


```
> plot([2 - t^2, t - t^3, t = -2..2])
```

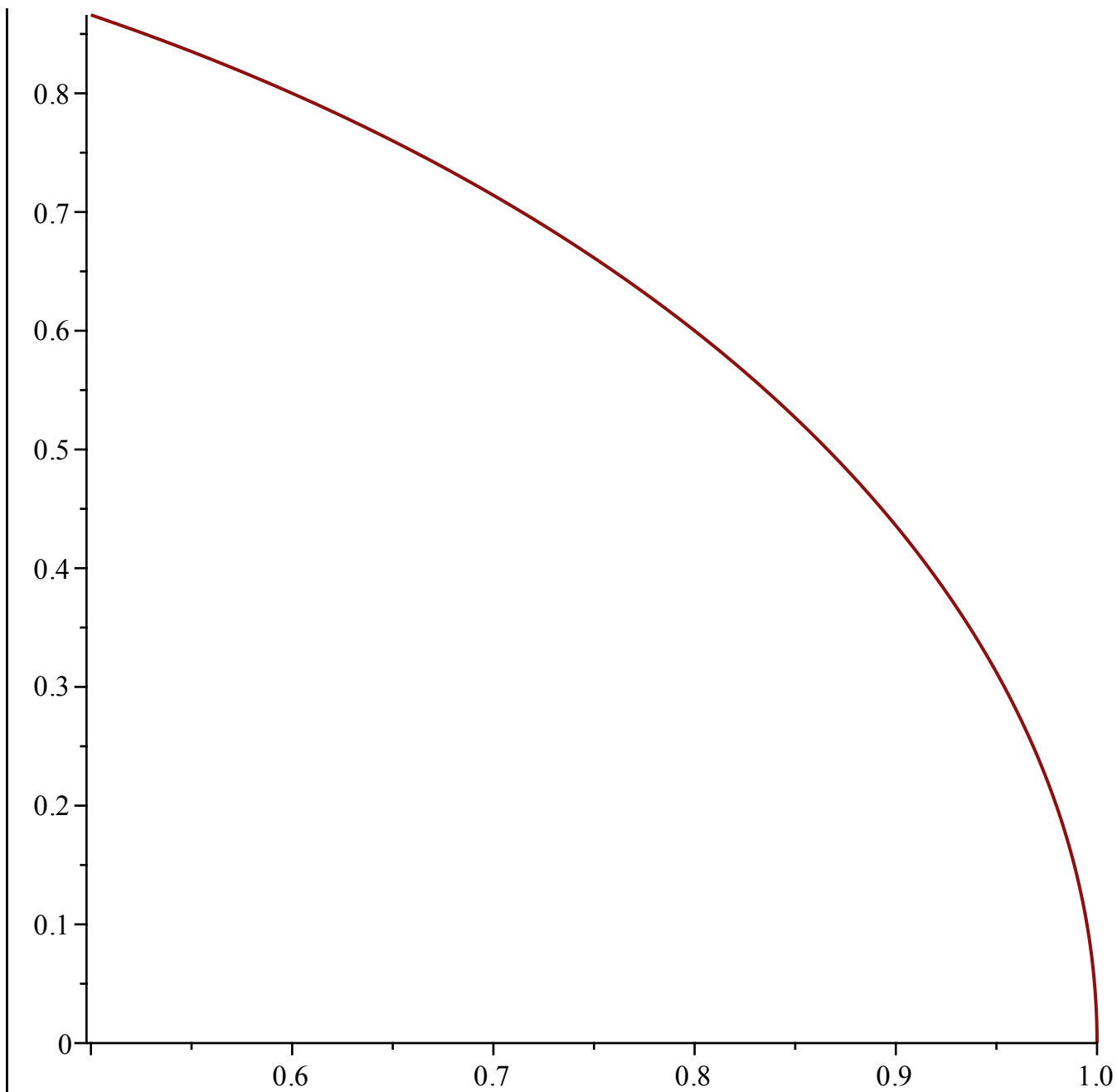




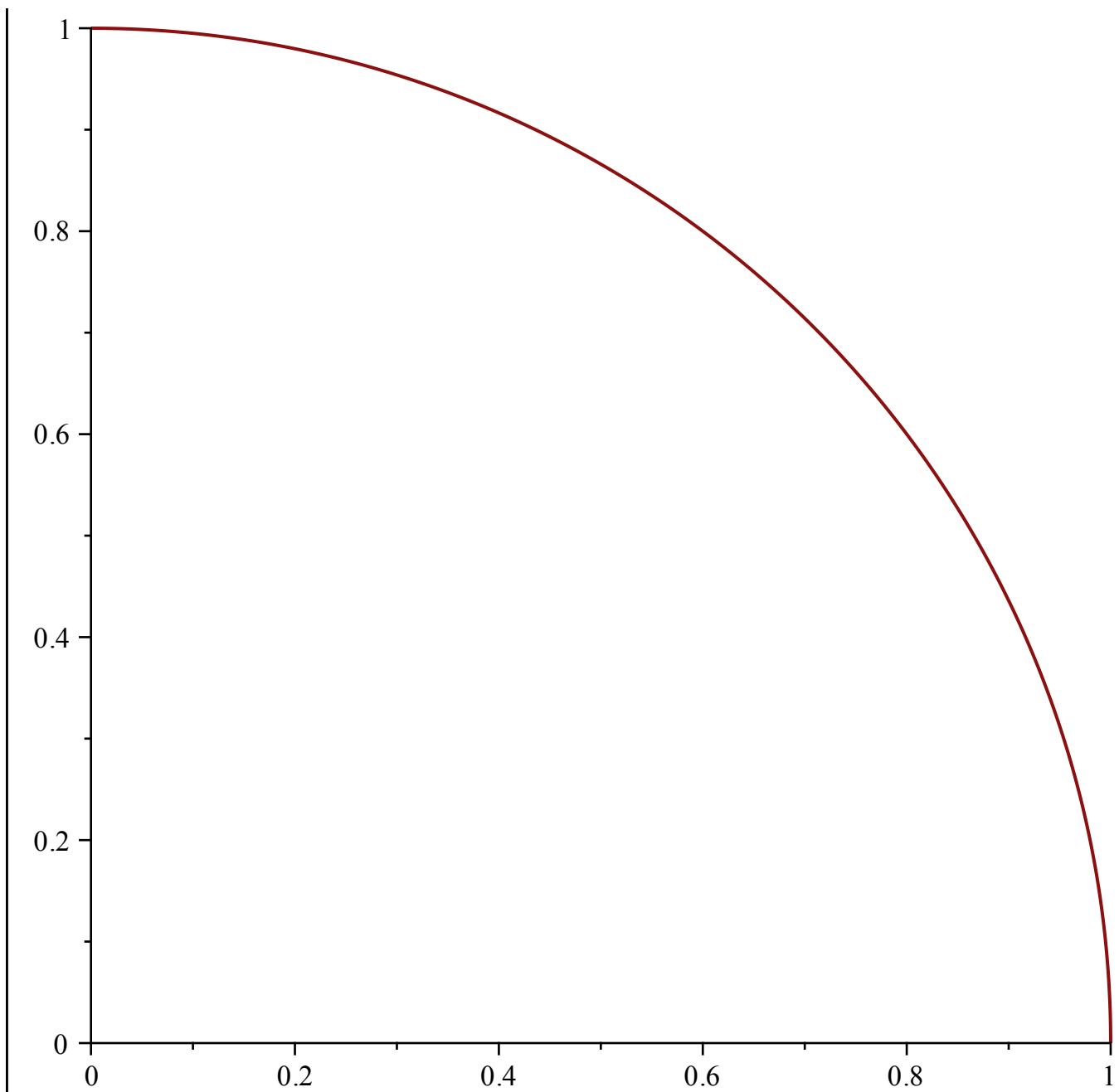
```
> plot([cos(t), sin(t), t = 0..Pi/6])
```



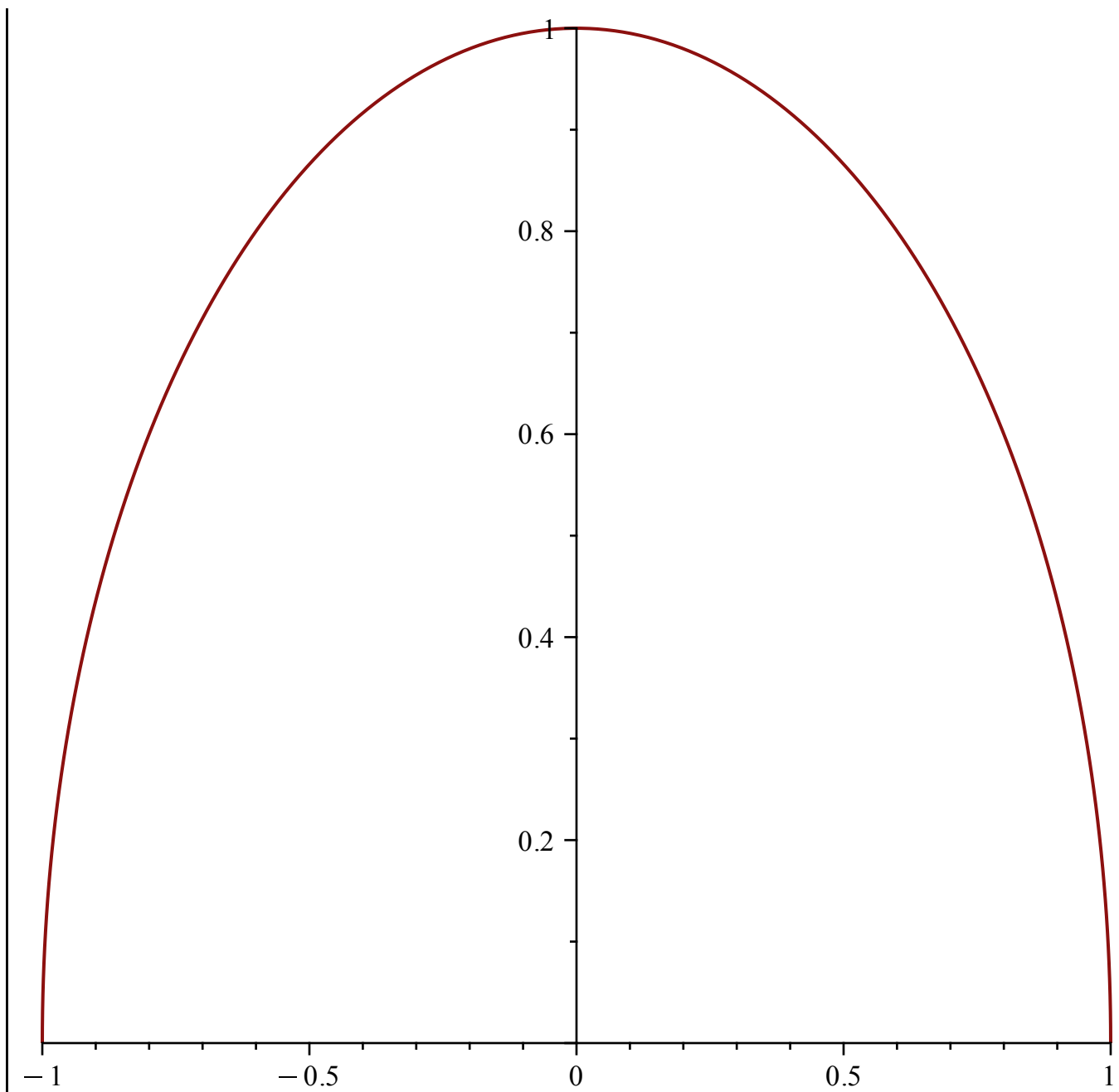
```
> plot( [ cos(t), sin(t), t = 0 .. Pi/3 ] )
```



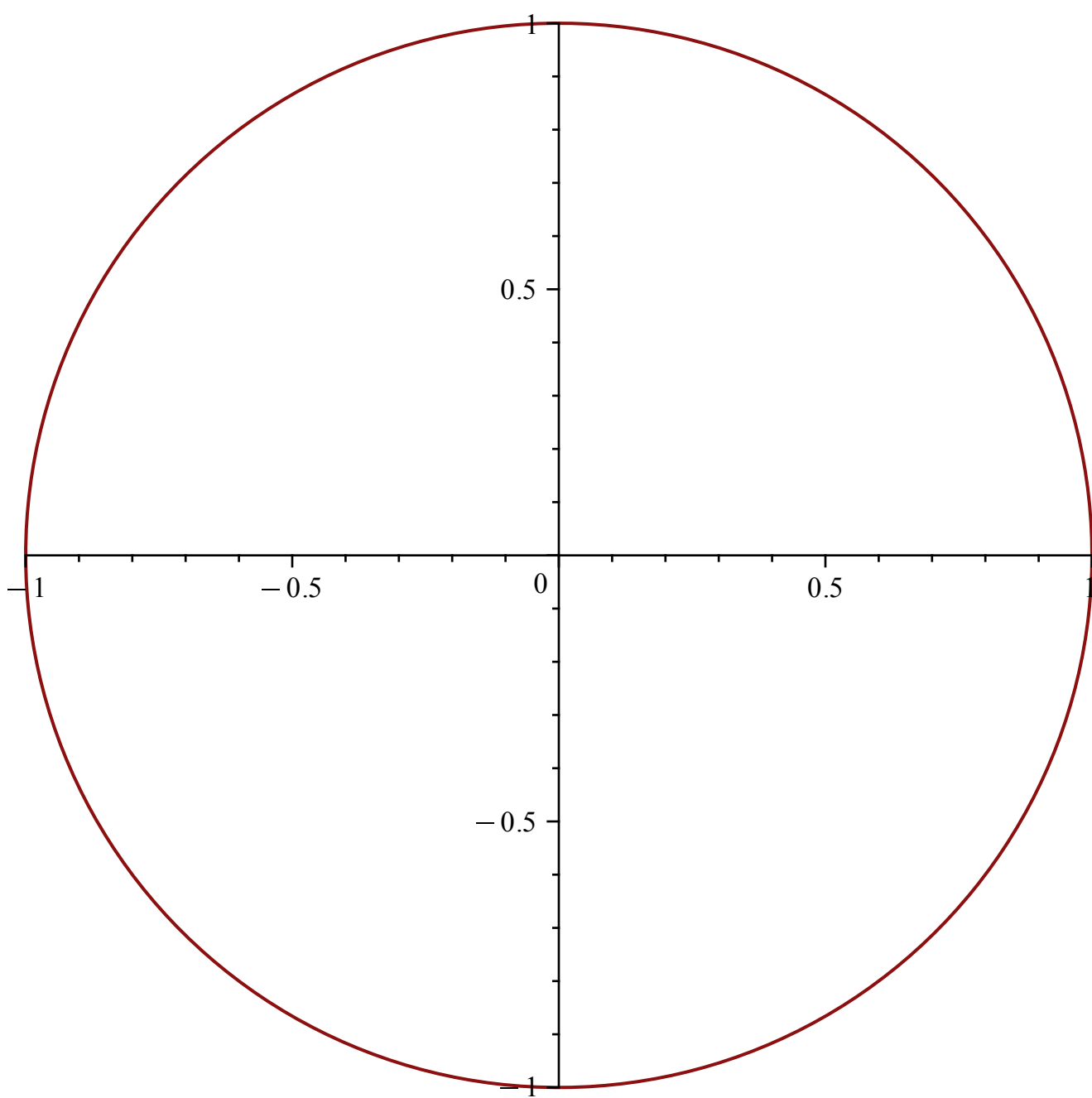
```
> plot( [ cos(t), sin(t), t = 0 ..  $\frac{\text{Pi}}{2}$  ] )
```



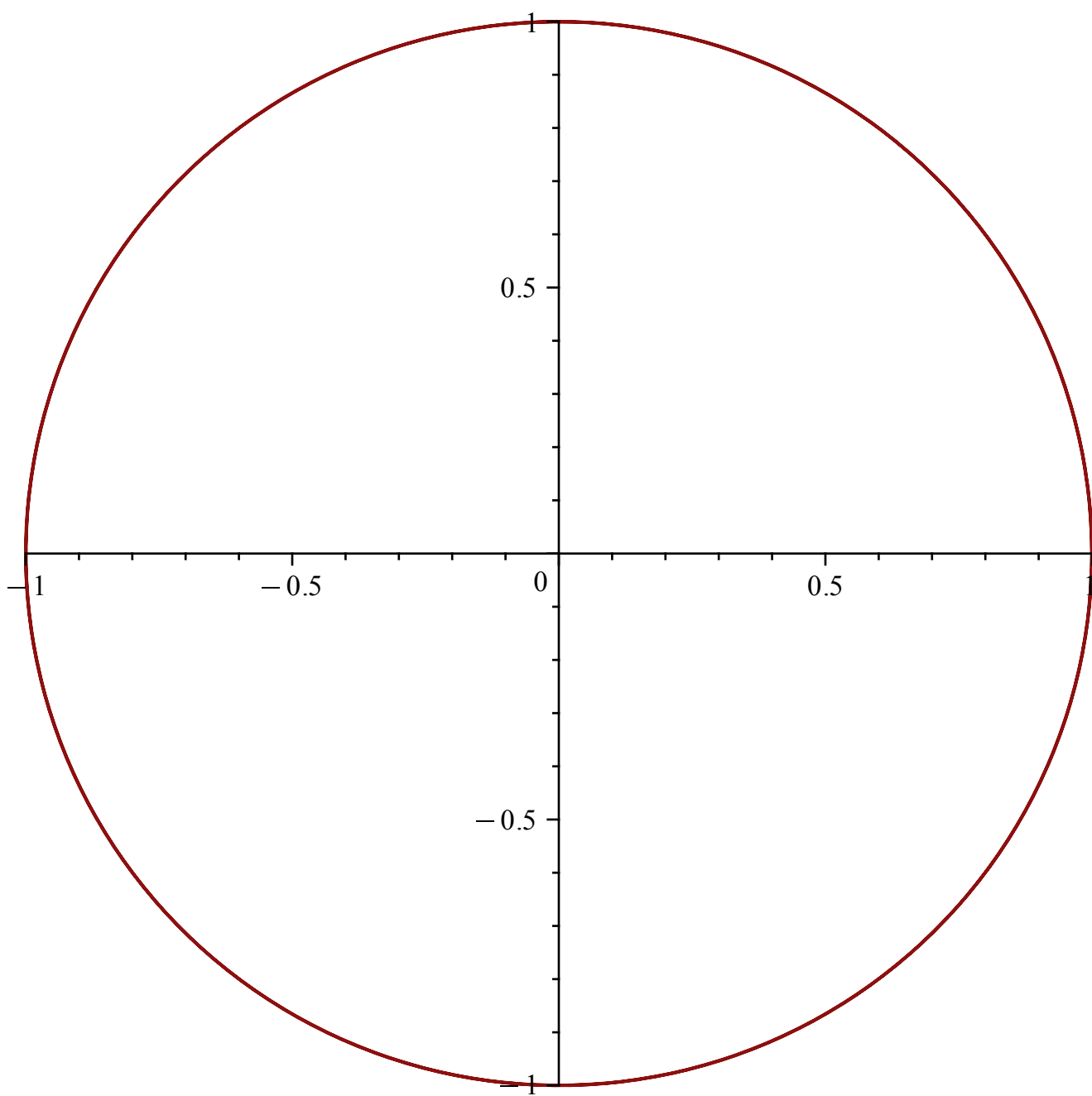
```
> plot([cos(t), sin(t), t = 0 .. Pi])
```



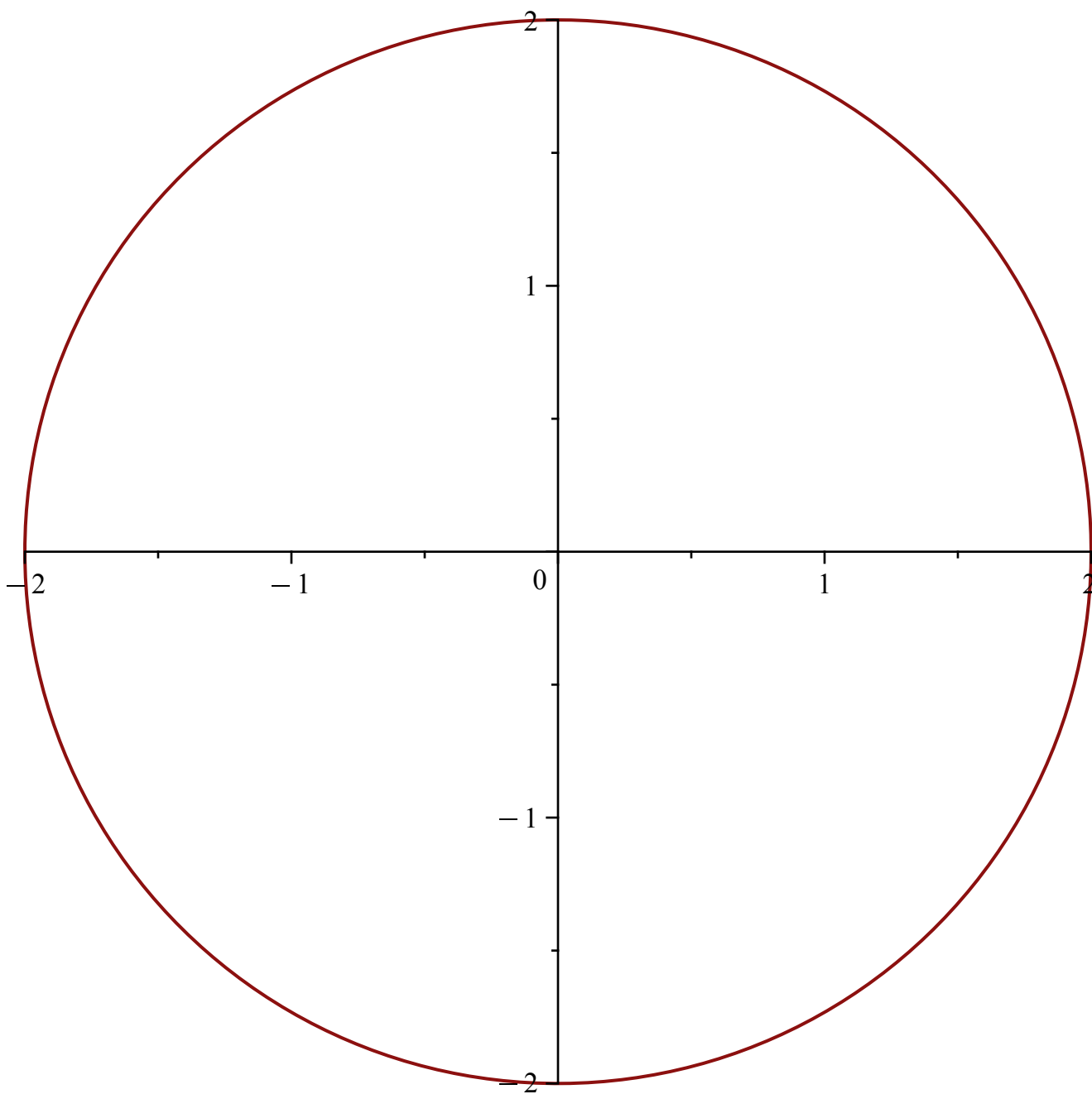
```
> plot([cos(t), sin(t), t = 0 .. 2 Pi])
```



```
> plot([cos(t), sin(t), t = 0..4 Pi])
```

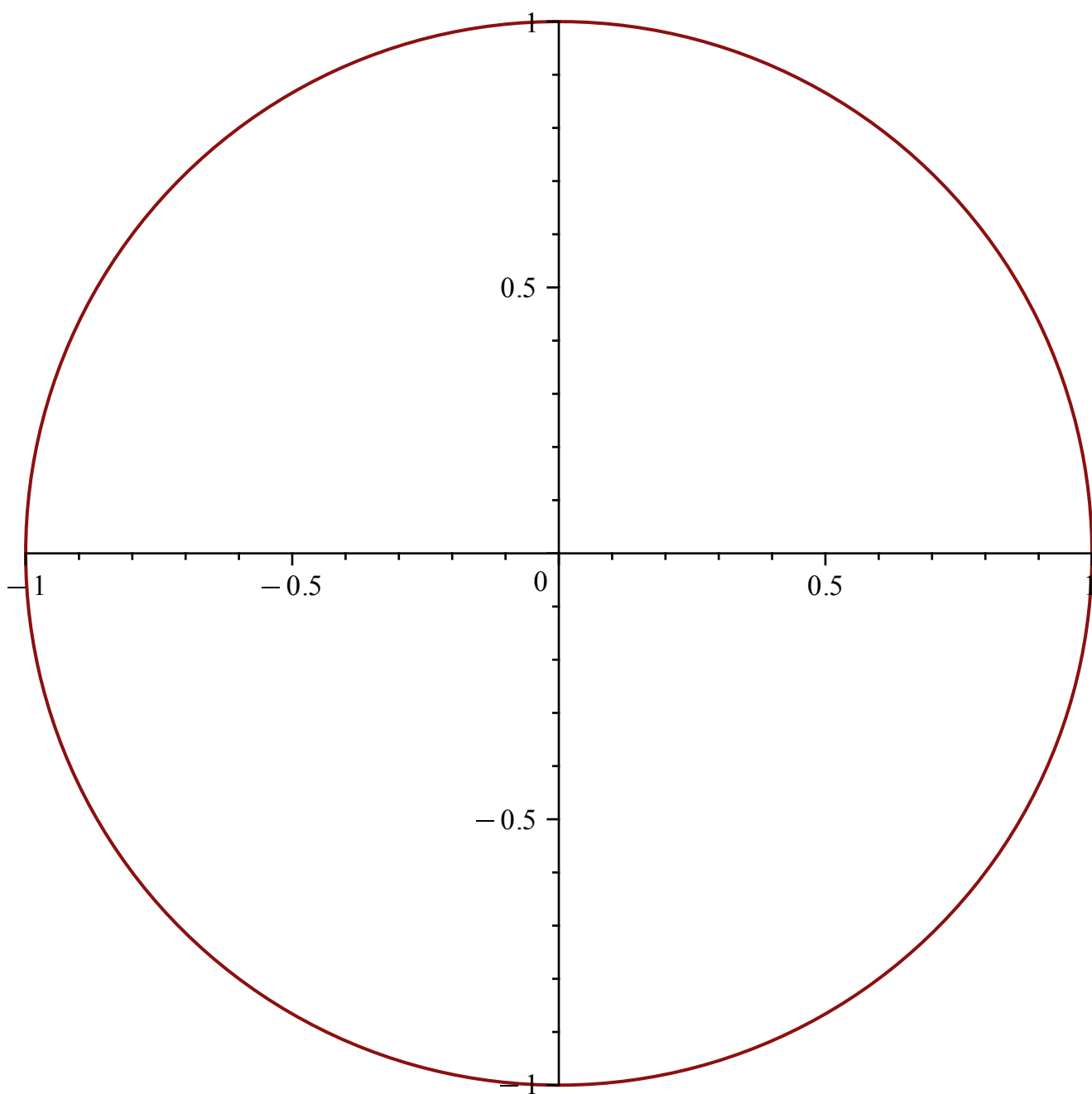


```
> plot([2*cos(t/3), 2*sin(t/3), t=0..6*Pi])
```



```
> plot([cos(4 t), sin(4 t), t = 0..Pi/2])
```



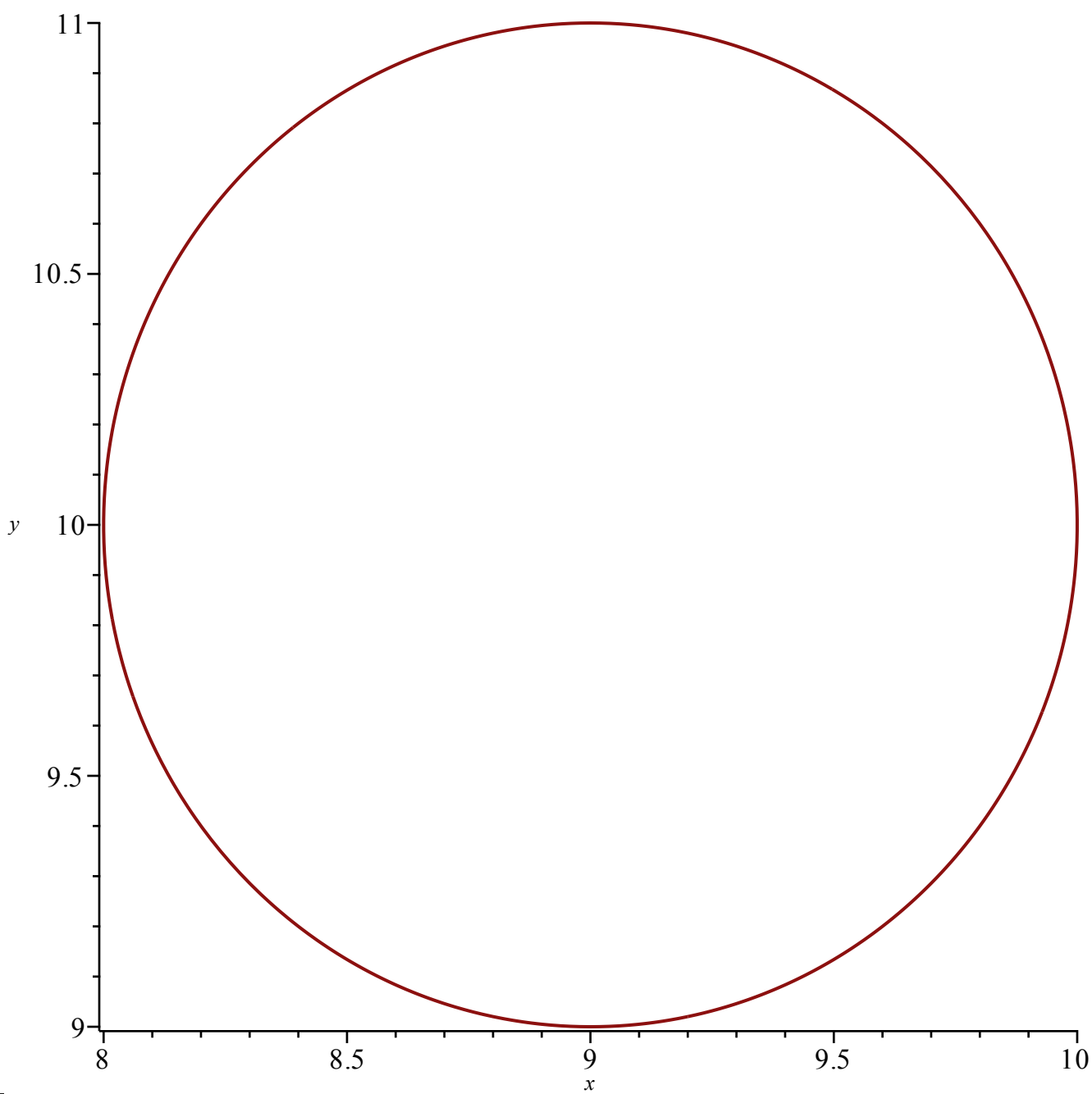


```

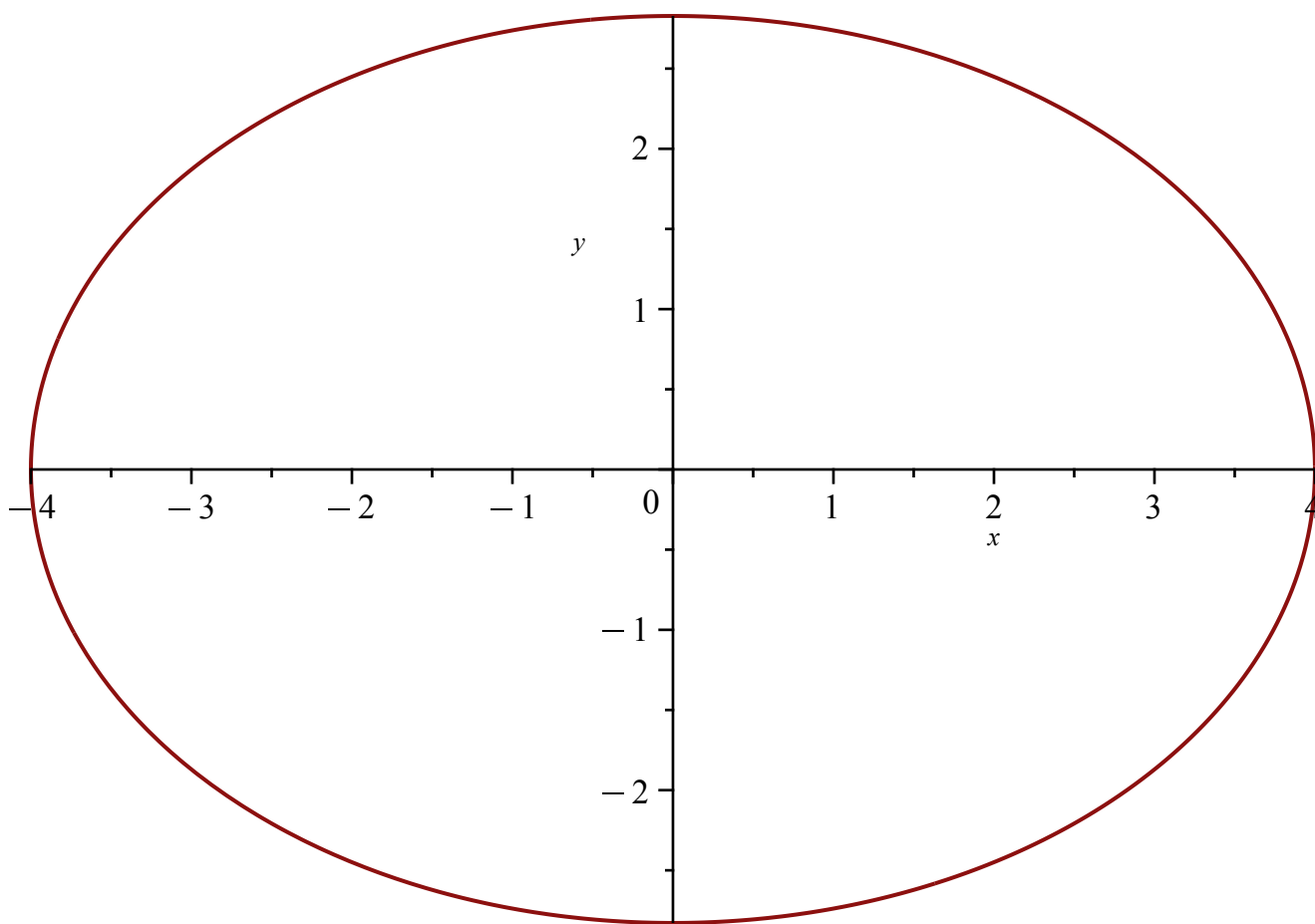
> with(plots)
[animate, animate3d, animatecurve, arrow, changecoords, complexplot, complexplot3d,
conformal, conformal3d, contourplot, contourplot3d, coordplot, coordplot3d, densityplot,
display, dualaxisplot, fieldplot, fieldplot3d, gradplot, gradplot3d, implicitplot, implicitplot3d,
inequal, interactive, interactiveparams, intersectplot, listcontplot, listcontplot3d, listdensityplot,
listplot, listplot3d, loglogplot, logplot, matrixplot, multiple, odeplot, pareto, plotcompare,
pointplot, pointplot3d, polarplot, polygonplot, polygonplot3d, polyhedra_supported,
polyhedraplot, rootlocus, semilogplot, setcolors, setoptions, setoptions3d, shadebetween,
spacecurve, sparsematrixplot, surfdata, textplot, textplot3d, tubeplot]
> implicitplot((x - 9)^2 + (y - 10)^2 = 1, x = 8..10, y = 9..11)

```

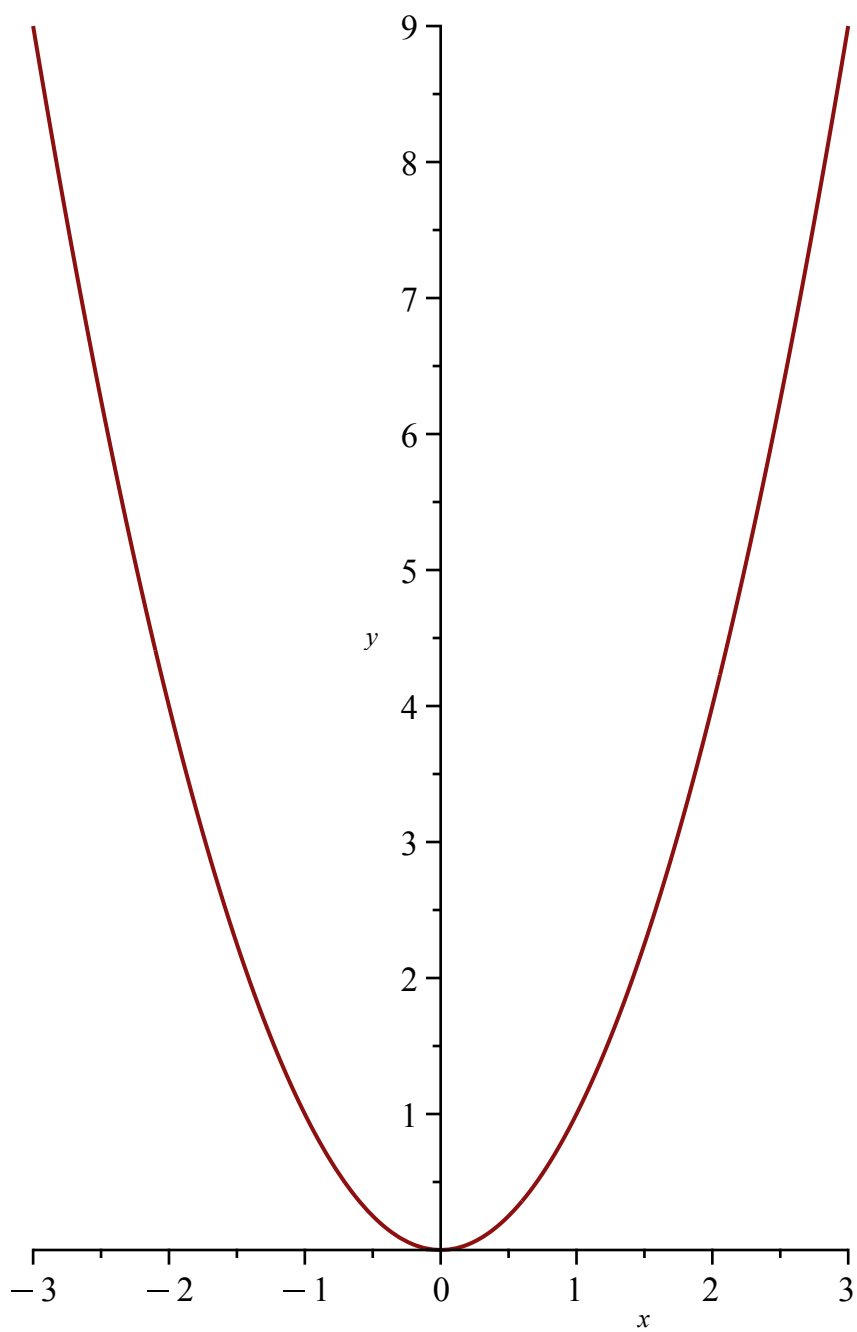
(52)



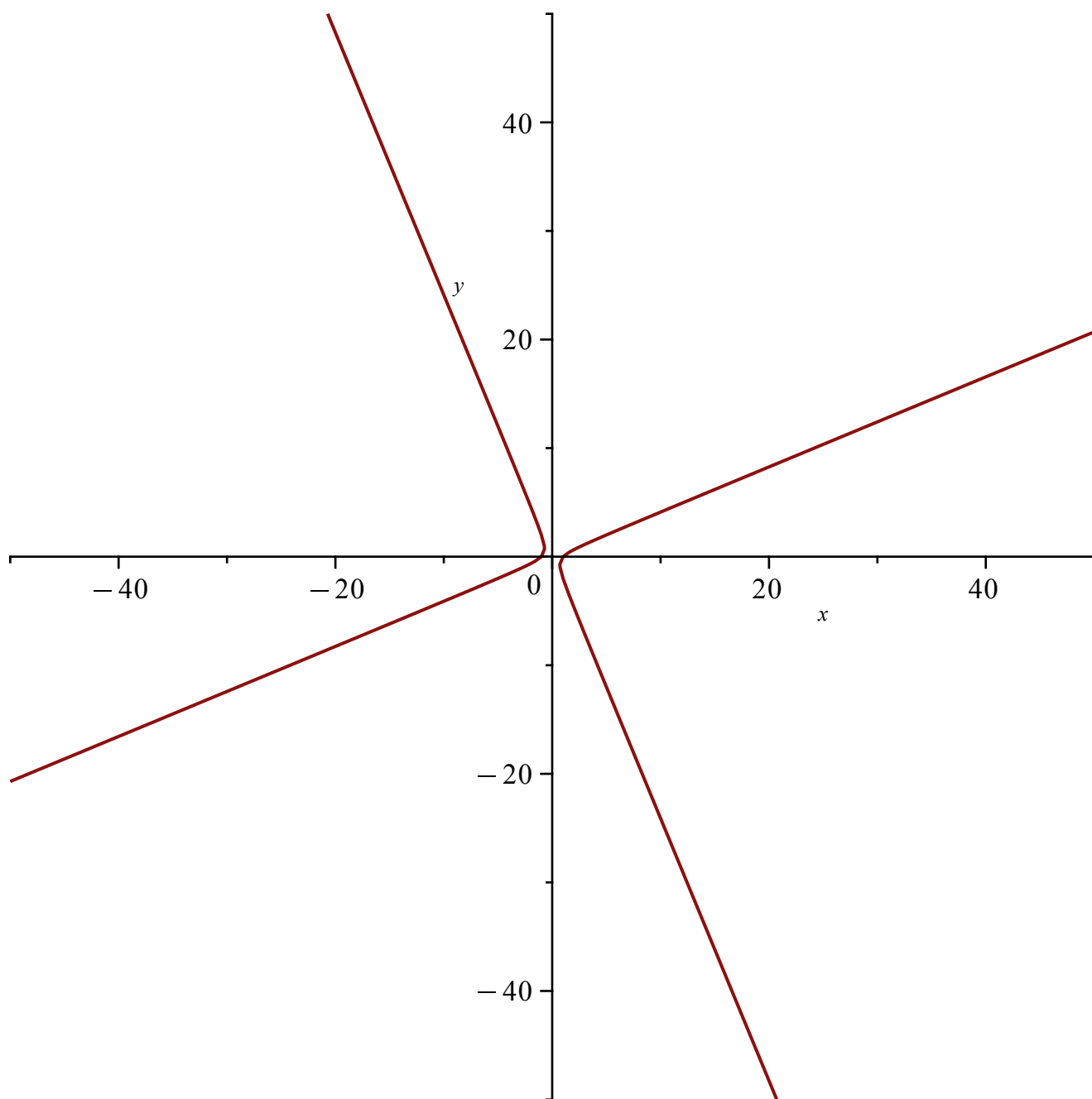
```
> implicitplot( $\frac{1}{8}(x^2) + \frac{1}{4} \cdot y^2 = 2$ ,  $x = -10 \dots 10$ ,  $y = -10 \dots 10$ , scaling = constrained)
```



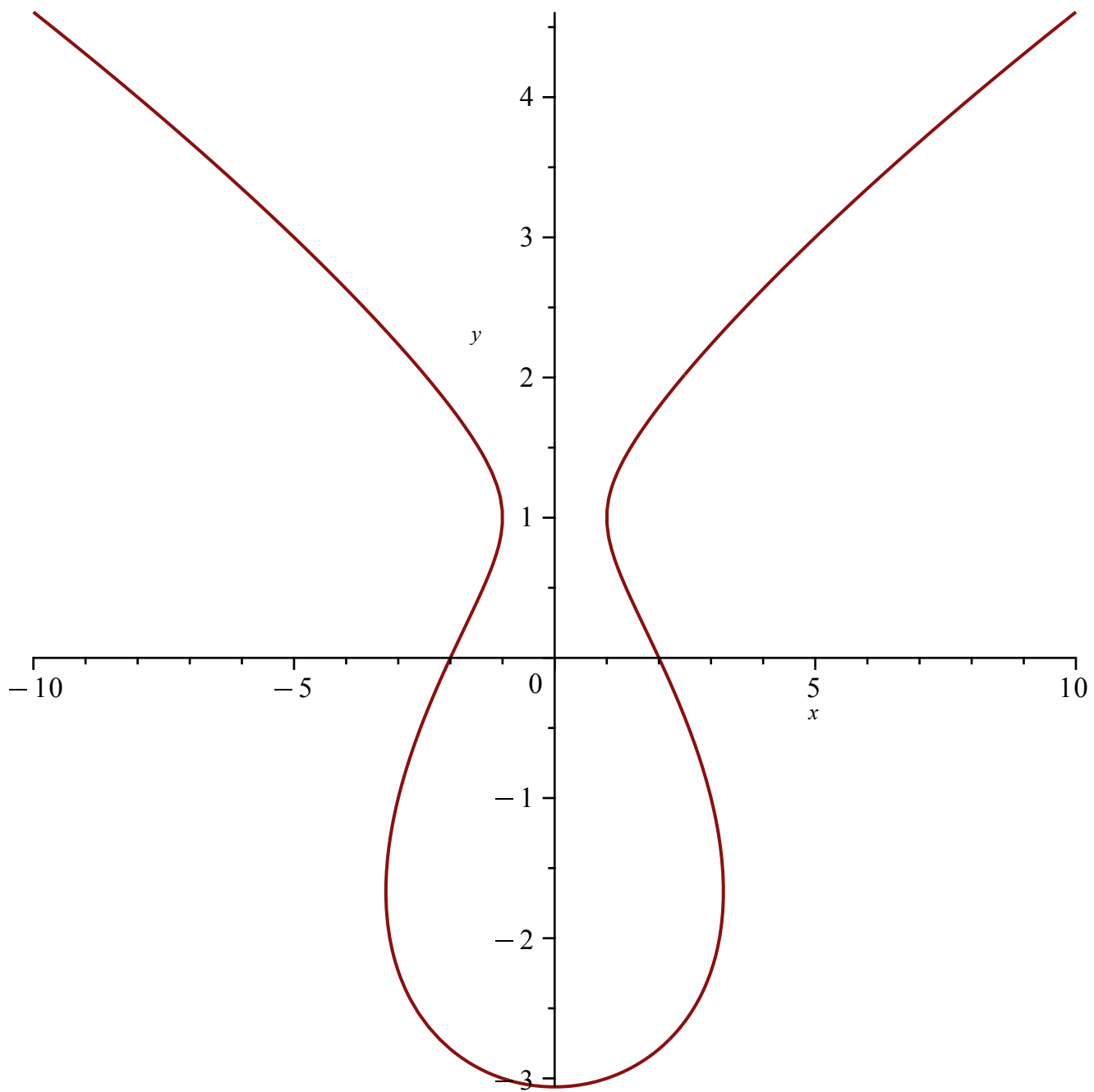
```
> implicitplot(y = x^2, x = -3..3, y = 0..10, scaling = constrained)
```



```
> implicitplot(x^2 - 2 x·y - y^2 = 1, x = -50 .. 50, y = -50 .. 50)
```



```
> implicitplot(y^3 + y^2 - 5 y - x^2 = -4, x = -10 .. 10, y = -10 .. 10)
```



```
> animate3d(t·x^2 + t·y^2, x=-5..5, y=-5..5, t=1..1.1)
```

