```
> #ex 1:
> f :=x->2*x*(1+y^2)
```

$$f := x \mapsto 2 \cdot x \cdot (y^2 + 1) \quad (1)$$

```
> ecdif1:=diff(y(x),x)=2*x*(1+y(x)^2)
```

$$ecdif1 := \frac{d}{dx} y(x) = 2\, x \left(1 + y(x)^2\right) \quad (2)$$

```
> dsolve(ecdif1,y(x))
```

$$y(x) = \tan\left(x^2 + 2\, c_1\right) \quad (3)$$

```
> expand(y(x) = tan(x^2+2*c__1));
```

$$y(x) = \frac{\frac{2 \tan(c_1)}{1 - \tan(c_1)^2} + \tan(x^2)}{1 - \frac{2 \tan(c_1) \tan(x^2)}{1 - \tan(c_1)^2}} \quad (4)$$

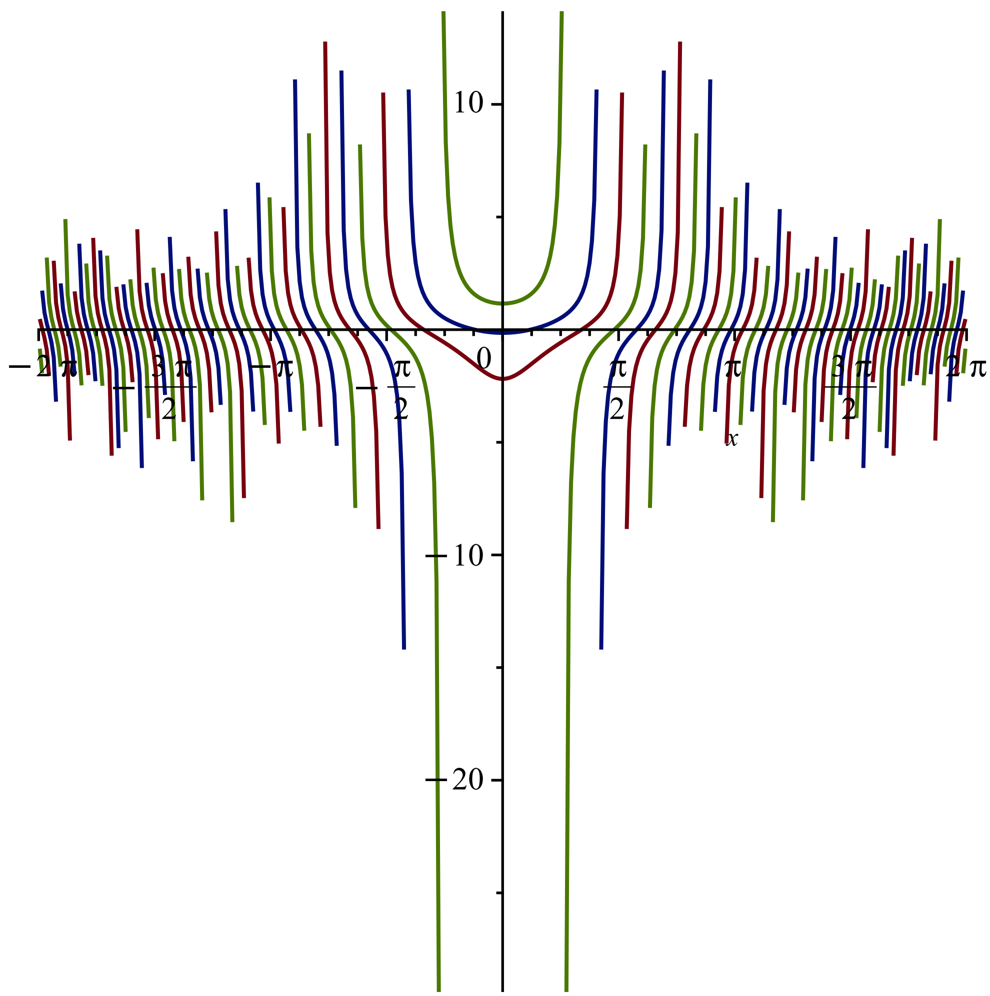
```
> with(plots):
> sol1:=dsolve(ecdif1,y(x))
```

$$sol1 := y(x) = \tan\left(x^2 + 2\, c_1\right) \quad (5)$$

```
> y1:=(x,c)->tan(x^2+c)
```

$$y1 := (x, c) \mapsto \tan\left(x^2 + c\right) \quad (6)$$

```
> plot([y1(x,2),y1(x,3),y1(x,4)],x=-2*Pi..2*Pi)
```




```
> ecdif2:=diff(y(x),x)= -2*x/(x^2-1)*(y(x))^2
```

$$ecdif2 := \frac{d}{dx}\, y(x) = -\frac{2\, x\, y(x)^2}{x^2 - 1} \tag{7}$$

```
> dsolve(ecdif2,y(x))
```

$$y(x) = \frac{1}{\ln(x-1) + \ln(x+1) + c_1} \tag{8}$$

```
> sol2:=dsolve(ecdif2,y(x))
```

$$sol2 := y(x) = \frac{1}{\ln(x-1) + \ln(x+1) + c_1} \tag{9}$$

```
> lhs((9)) - rhs((9)) = 0;
```

$$y(x) - \frac{1}{\ln(x-1) + \ln(x+1) + c_1} = 0 \tag{10}$$

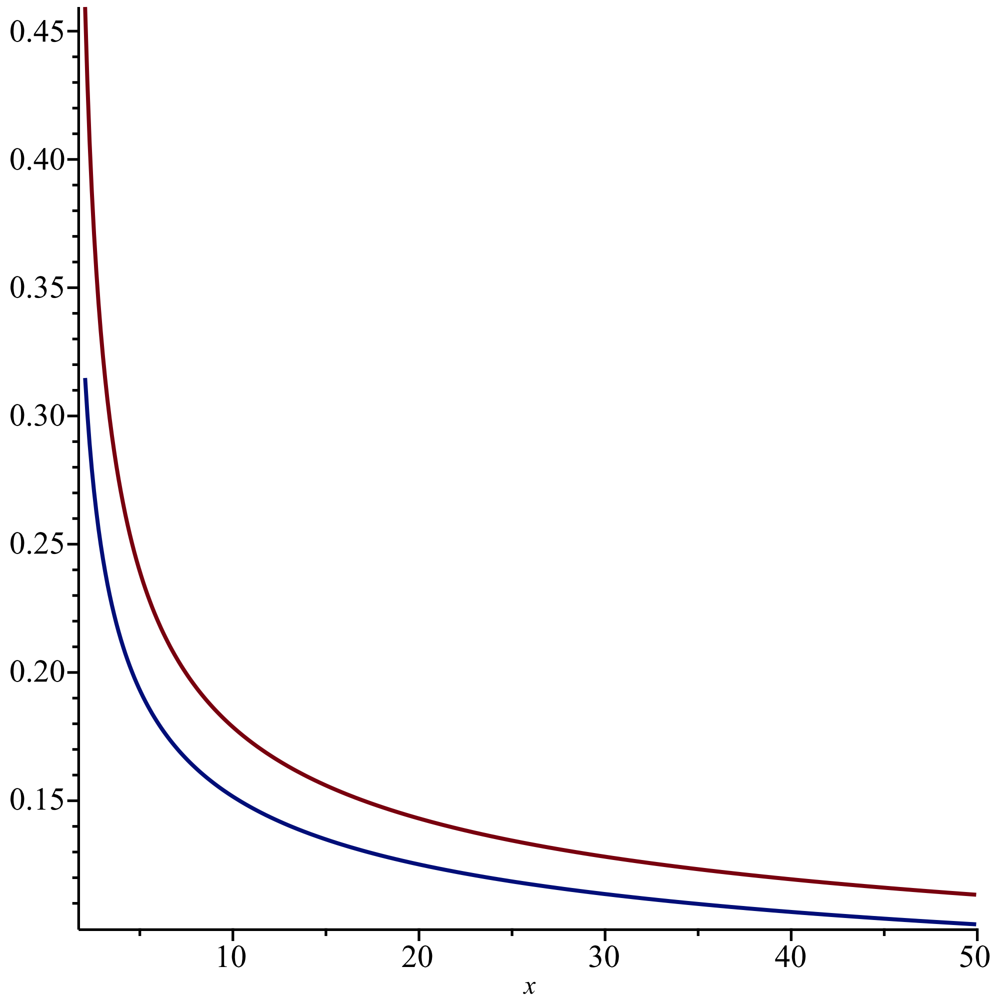
```
> right_hand_expr:= rhs(sol2)
```

$$right\_hand\_expr := \frac{1}{\ln(x-1) + \ln(x+1) + c_1} \tag{11}$$

```
> y2:=unapply(right_hand_expr,x,c__1)
```

$$y2 := (x, c_1) \mapsto right\_hand\_expr \tag{12}$$

```
> plot([y2(x,1),y2(x,2)],x=2..50)
```




```
> ecdif3:=diff(y(x),x)=1/2+1/2*(y(x)/x)^2
```

$$ecdif3 := \frac{d}{dx}\,y(x) = \frac{1}{2} + \frac{y(x)^2}{2\,x^2} \quad (13)$$

```
> restart
> ecdif4:=2*x*diff(y(x),x)=x^2+(y(x))^2
```

$$ecdif4 := 2\,x\left(\frac{d}{dx}\,y(x)\right) = x^2 + y(x)^2 \quad (14)$$

```
> dsolve(ecdif4,y(x))
```

$$y(x) = \frac{c_1\,x\,\mathrm{BesselY}\left(1, \frac{x}{2}\right)}{c_1\,\mathrm{BesselY}\left(0, \frac{x}{2}\right) + \mathrm{BesselJ}\left(0, \frac{x}{2}\right)} + \frac{\mathrm{BesselJ}\left(1, \frac{x}{2}\right)\,x}{c_1\,\mathrm{BesselY}\left(0, \frac{x}{2}\right) + \mathrm{BesselJ}\left(0, \frac{x}{2}\right)} \quad (15)$$

```
> with(plots):

> restart
> ecdif4:=diff(y(x),x)=-x/y(x)
```

$$ecdif4 := \frac{d}{dx}\,y(x) = -\frac{x}{y(x)} \quad (16)$$

```
> dsolve(ecdif4,y(x))
```

$$y(x)=\sqrt{-x^2+c_1},\ y(x)=-\sqrt{-x^2+c_1} \tag{17}$$

```
> sol4:=dsolve(ecdif4,y(x))
```

$$sol4 := y(x)=\sqrt{-x^2+c_1},\ y(x)=-\sqrt{-x^2+c_1} \tag{18}$$

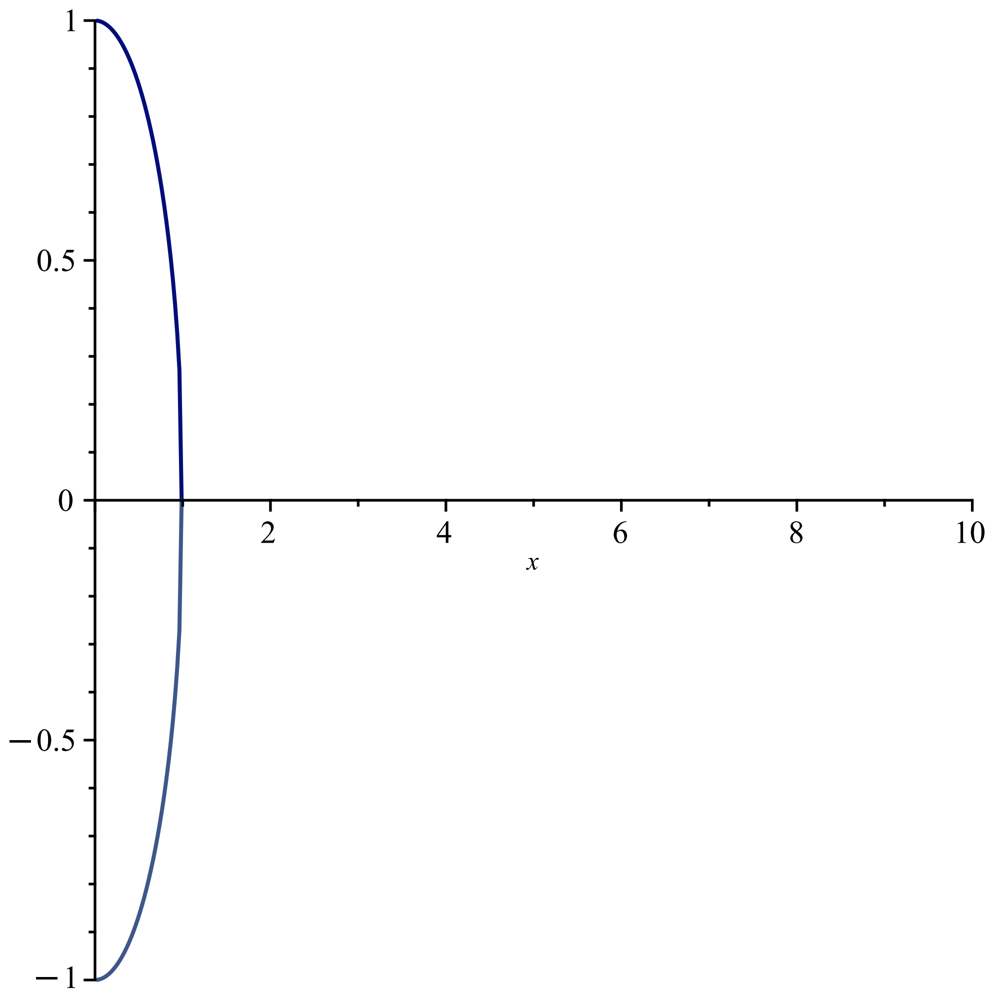
```
> y4:=unapply(rhs(sol4[1]),x,c__1)
```

$$y4 := (x, c_1) \mapsto \sqrt{-x^2+c_1} \tag{19}$$

```
> y5:=unapply(rhs(sol4[2]),x,c__1)
```

$$y5 := (x, c_1) \mapsto -\sqrt{-x^2+c_1} \tag{20}$$

```
> with(plots):
> plot([y4(x,0),y4(x,1),y5(x,0),y5(x,1)],x=0..10)
```




```
> restart
> ecdif5:=diff(y(x),x)=-x/(y(x))^3
```

$$ecdif5 := \frac{d}{dx}\, y(x) = -\frac{x}{y(x)^3} \tag{21}$$

```
> dsolve(ecdif5,y(x))
```

$$y(x)=\left(-2x^2+c_1\right)^{1/4},\ y(x)=-\left(-2x^2+c_1\right)^{1/4},\ y(x)=-\mathrm{I}\left(-2x^2+c_1\right)^{1/4},\ y(x)=\mathrm{I}\,(\tag{22}$$

$$-2x^2+c_1\big)^{1/4}$$

```
> sol5:=dsolve(ecdif5,y(x))
```

$$sol5 := y(x) = \left(-2x^2+c_1\right)^{1/4}, y(x) = -\left(-2x^2+c_1\right)^{1/4}, y(x) = -\mathrm{I}\left(-2x^2+c_1\right)^{1/4}, y(x) = \mathrm{I}\left(-2x^2+c_1\right)^{1/4} \quad (23)$$

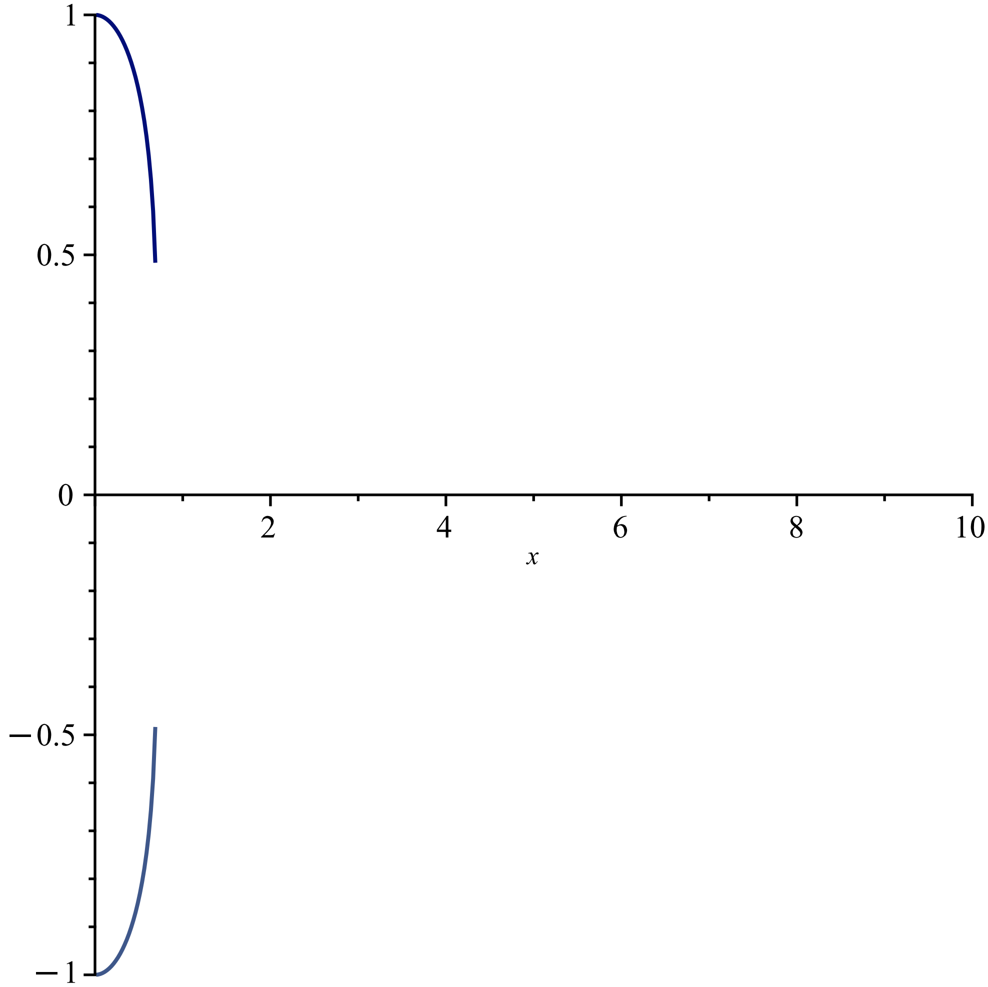
```
> y1:=unapply(rhs(sol5[1]),x,c__1)
```

$$y1 := \left(x, c_1\right) \mapsto \left(-2\cdot x^2+c_1\right)^{1/4} \quad (24)$$

```
> y2:=unapply(rhs(sol5[2]),x,c__1)
```

$$y2 := \left(x, c_1\right) \mapsto -\left(-2\cdot x^2+c_1\right)^{1/4} \quad (25)$$

```
> with(plots):
> plot([y1(x,0),y1(x,1),y2(x,0),y2(x,1)],x=0..10)
```




```
> restart
> ecdif6:=diff(y(x),x)=-(x+y(x))/y(x)
```

$$ecdif6 := \frac{\mathrm{d}}{\mathrm{d}x}\, y(x) = -\frac{x+y(x)}{y(x)} \quad (26)$$

```
> dsolve(ecdif6,y(x))
```

(27)

$$y(x) = \frac{\sqrt{3}\, x \tan\left(\mathit{RootOf}\left(\sqrt{3}\, \ln\left(\frac{3\, x^2}{4} + \frac{3\, x^2 \tan(\_Z)^2}{4}\right) + 2\sqrt{3}\, c_1 - 2\,\_Z\right)\right)}{2} - \frac{x}{2} \qquad \textbf{(27)}$$

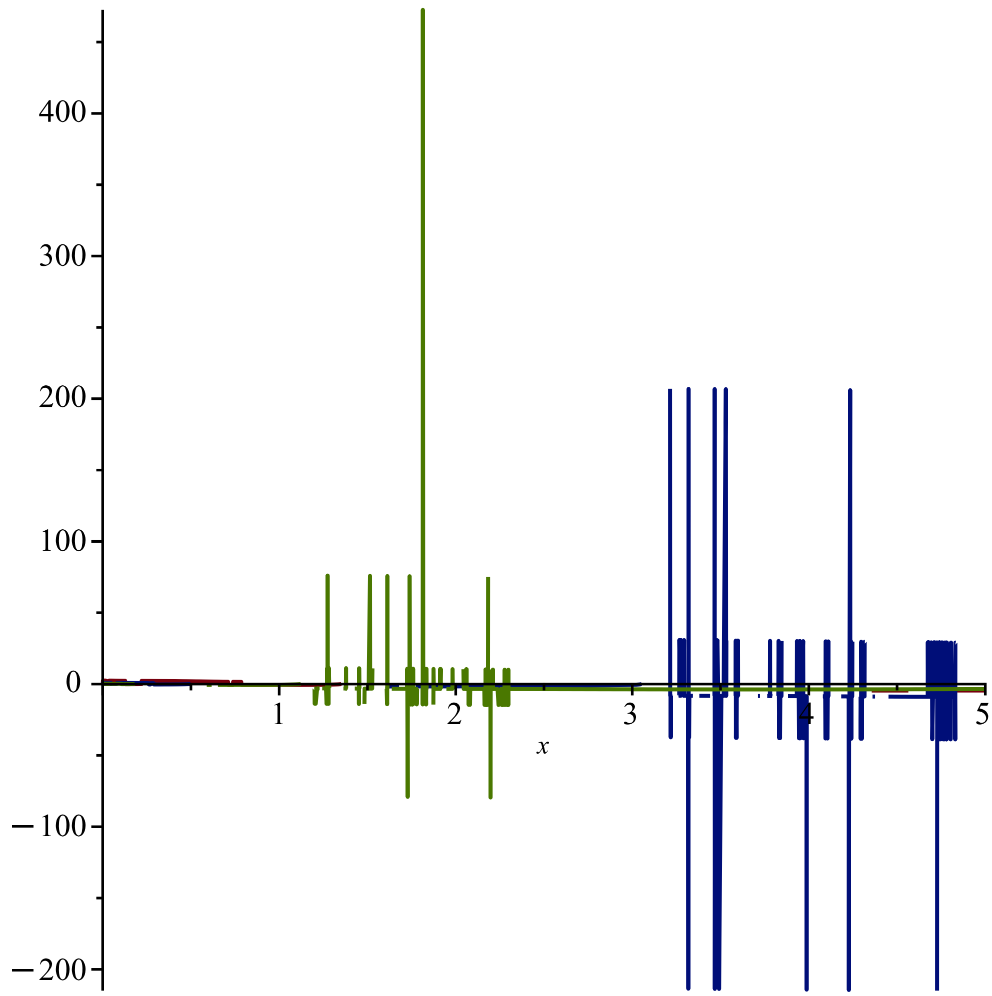
```
> sol6:=dsolve(ecdif6,y(x))
```

$$sol6 := y(x) = \frac{\sqrt{3}\, x \tan\left(\mathit{RootOf}\left(\sqrt{3}\, \ln\left(\frac{3\, x^2}{4} + \frac{3\, x^2 \tan(\_Z)^2}{4}\right) + 2\sqrt{3}\, c_1 - 2\,\_Z\right)\right)}{2} - \frac{x}{2} \qquad \textbf{(28)}$$

```
> y6:=unapply(rhs(sol6),x,c__1)
```

$$y6 := (x, c_1) \mapsto \frac{\sqrt{3} \cdot x \cdot \tan\left(\mathit{RootOf}\left(\sqrt{3} \cdot \ln\left(\frac{3 \cdot x^2}{4} + \frac{3 \cdot x^2 \cdot \tan(\_Z)^2}{4}\right) + 2 \cdot \sqrt{3} \cdot c_1 - 2 \cdot \_Z\right)\right)}{2} - \frac{x}{2} \qquad \textbf{(29)}$$

```
> with(plots):
> plot([y6(x,0),y6(x,1),y6(x,2)],x=0..5)
```




```
> restart
> ecdif7:=diff(y(x),x)+y(x)*tan(x)=1/cos(x)
```

$$ecdif7 := \frac{d}{dx}\, y(x) + y(x)\tan(x) = \frac{1}{\cos(x)} \tag{30}$$

```
> dsolve(ecdif7,y(x))
```

$$y(x) = \left(\tan(x) + c_1\right)\cos(x) \tag{31}$$

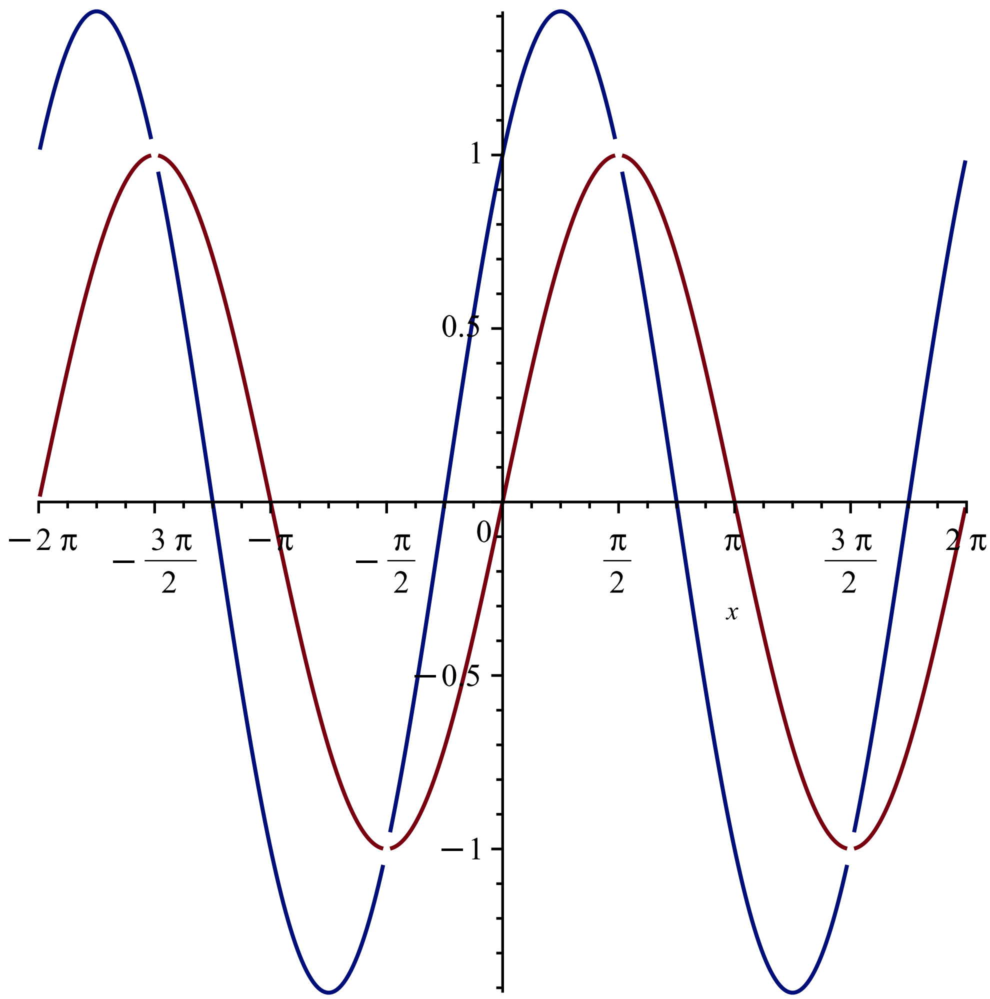
```
> sol7:=dsolve(ecdif7,y(x))
```

$$sol7 := y(x) = \left(\tan(x) + c_1\right)\cos(x) \tag{32}$$

```
> y7:=unapply(rhs(sol7),x,c__1)
```

$$y7 := \left(x, c_1\right) \mapsto \left(\tan(x) + c_1\right)\cdot\cos(x) \tag{33}$$

```
> with(plots):
> plot([y7(x,0),y7(x,1)],x=-2*Pi..2*Pi)
```




```
> restart
> ecdif8:=diff(y(x),x)+2/x*y(x)=x^3
```

$$ecdif8 := \frac{d}{dx}\, y(x) + \frac{2\, y(x)}{x} = x^3 \tag{34}$$

```
> dsolve(ecdif8,y(x))
```

$$y(x) = \frac{\frac{x^6}{6} + c_1}{x^2} \tag{35}$$

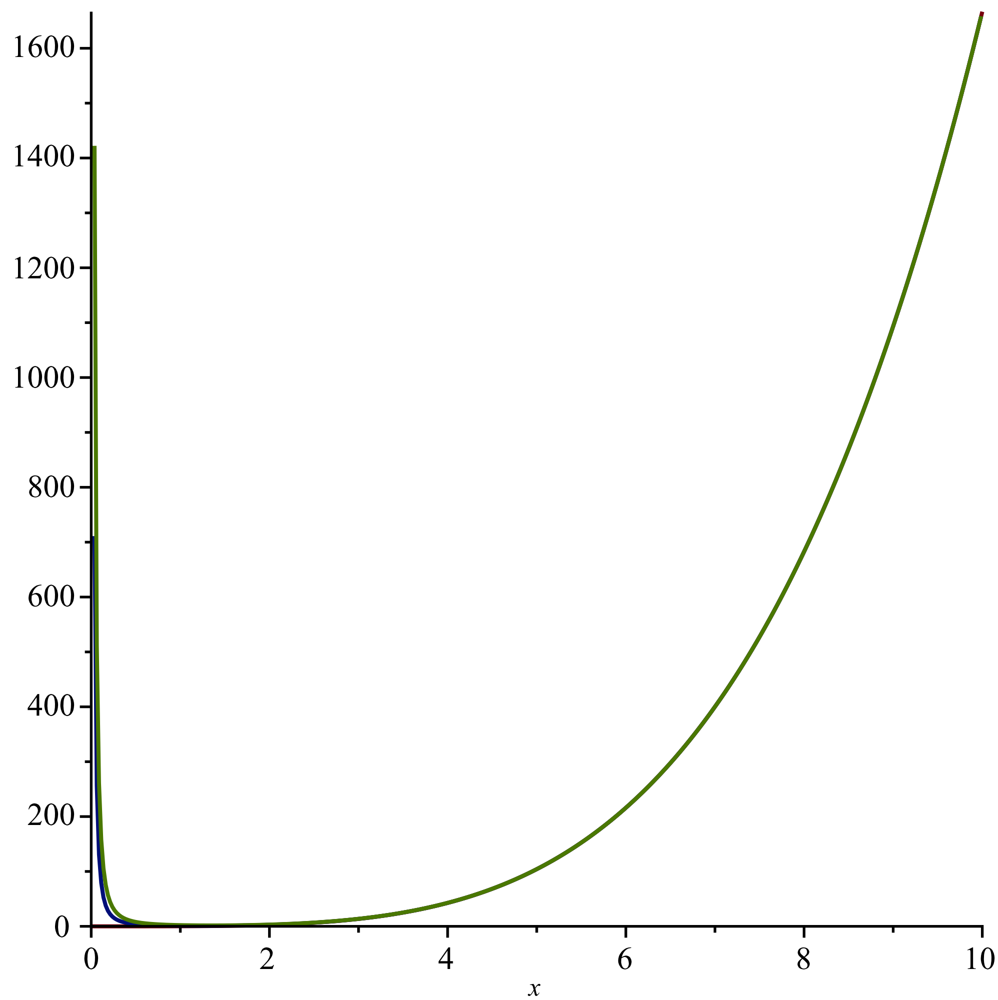
```
> sol8:=dsolve(ecdif8,y(x))
```

$$sol8 := y(x) = \frac{\frac{x^6}{6} + c_1}{x^2} \tag{36}$$

```
> y8:=unapply(rhs(sol8),x,c__1)
```

$$y8 := (x, c_1) \mapsto \frac{\frac{x^6}{6} + c_1}{x^2} \tag{37}$$

```
> with(plots):
> plot([y8(x,0),y8(x,1),y8(x,2)],x=0..10)
```




```
> restart
> ecdif9:=diff(y(x),x$2)+diff(y(x),x)=sin(x)+cos(x)
```

$$ecdif9 := \frac{d^2}{dx^2} y(x) + \frac{d}{dx} y(x) = \sin(x) + \cos(x) \tag{38}$$

```
> dsolve(ecdif9,y(x))
```

$$y(x) = -e^{-x} c_1 - \cos(x) + c_2 \tag{39}$$

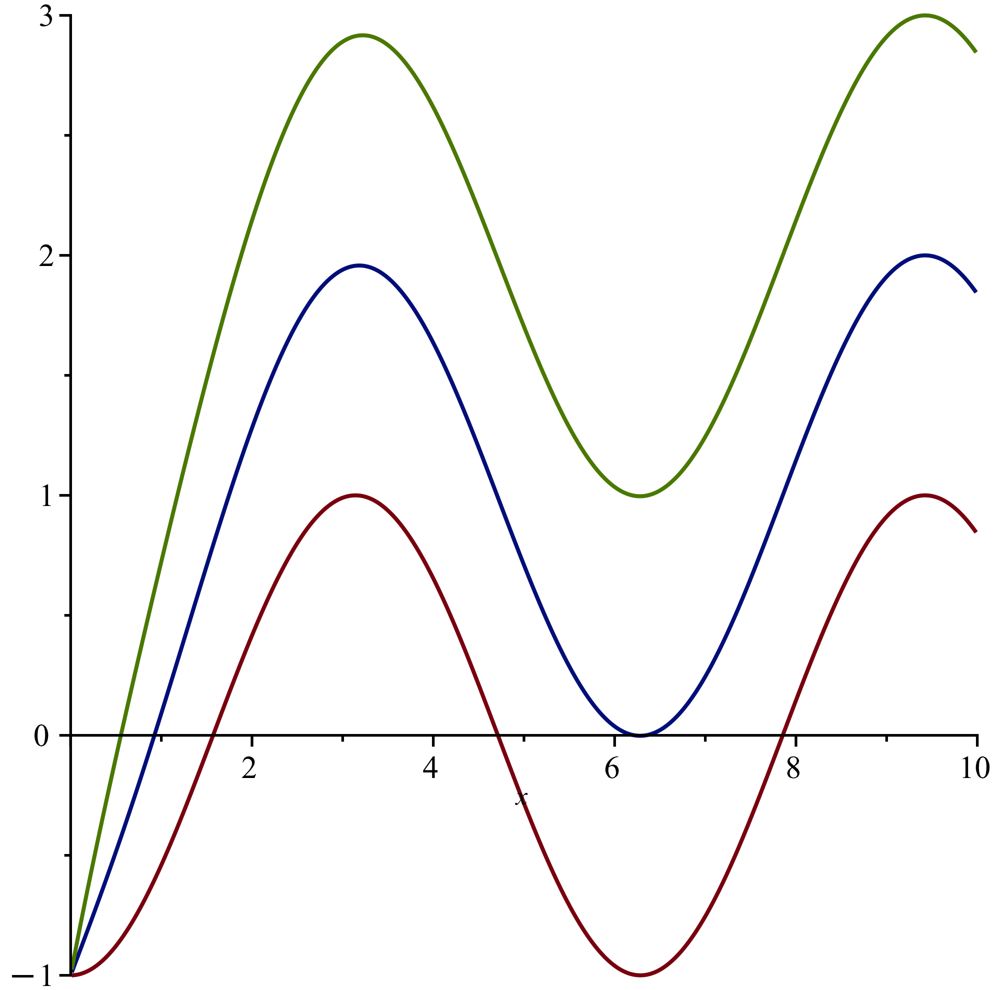
```
> sol9:=dsolve(ecdif9,y(x))
```

$$sol9 := y(x) = -e^{-x} c_1 - \cos(x) + c_2 \tag{40}$$

```
> y9:=unapply(rhs(sol9),x,c__1,c__2)
```

$$y9 := \left(x, c_1, c_2\right) \mapsto -\mathrm{e}^{-x} \cdot c_1 - \cos(x) + c_2 \tag{41}$$

```
> with(plots):
> plot([y9(x,0,0),y9(x,1,1),y9(x,2,2)],x=0..10)
```




```
> restart
> ecdif10:=diff(y(x),x$2)-y(x)=exp(2*x)
```

$$ecdif10 := \frac{\mathrm{d}^2}{\mathrm{d}x^2}\, y(x) - y(x) = \mathrm{e}^{2\,x} \tag{42}$$

```
> dsolve(ecdif10,y(x))
```

$$y(x) = \mathrm{e}^{x}\, c_2 + \mathrm{e}^{-x}\, c_1 + \frac{\mathrm{e}^{2\,x}}{3} \tag{43}$$

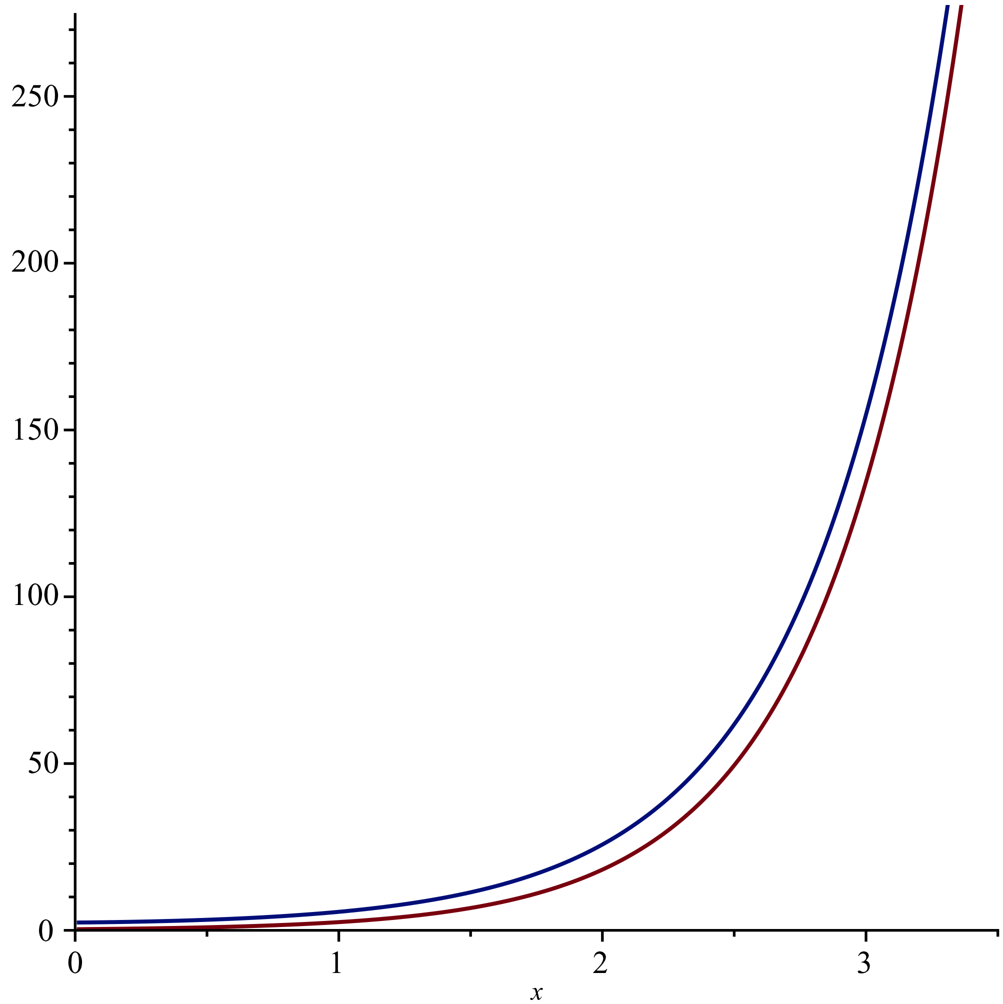
```
> sol10:=dsolve(ecdif10,y(x))
```

$$sol10 := y(x) = \mathrm{e}^{x}\, c_2 + \mathrm{e}^{-x}\, c_1 + \frac{\mathrm{e}^{2\,x}}{3} \tag{44}$$

```
> y10:=unapply(rhs(sol10),x,c__1,c__2)
```

$$y10 := \left(x, c_1, c_2\right) \mapsto \mathrm{e}^{x} \cdot c_2 + \mathrm{e}^{-x} \cdot c_1 + \frac{\mathrm{e}^{2 \cdot x}}{3} \tag{45}$$

```
> with(plots):
> plot([y10(x,0,0),y10(x,1,1)],x=0..5)
```




```
> #ex 2:
> restart
> with(DEtools):
> ecdif1:=diff(y(x),x)=1+y(x)^2
```

$$ecdif1 := \frac{d}{dx}\, y(x) = 1 + y(x)^2 \tag{46}$$

```
> cond_in:=y(0)=1
```

$$cond\_in := y(0) = 1 \tag{47}$$

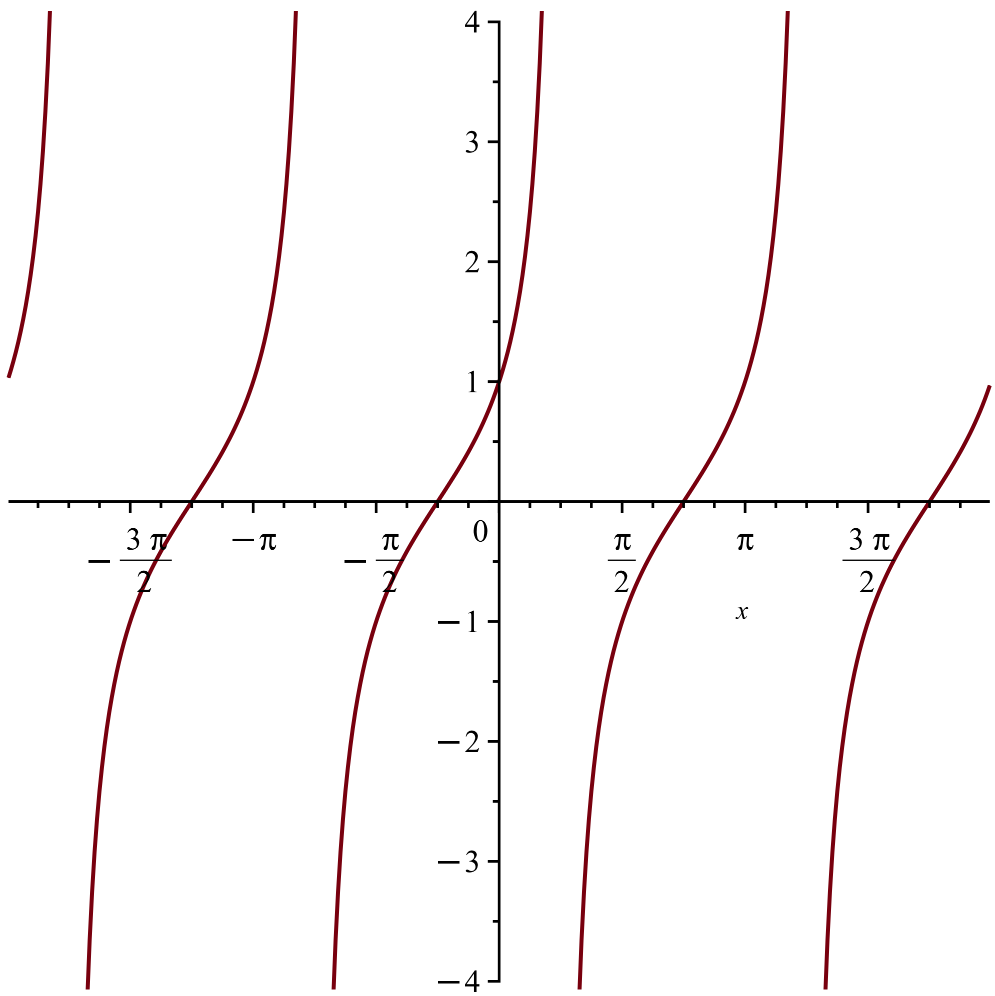
```
> sol1:=dsolve({ecdif1,cond_in},y(x))
```

$$sol1 := y(x) = \tan\left(x + \frac{\pi}{4}\right) \tag{48}$$

```
> y1:=unapply(rhs(sol1),x)
```

$$y1 := x \mapsto \tan\left(x + \frac{\pi}{4}\right) \tag{49}$$

```
> with(plots):
> plot(y1(x),x=-2*Pi..2*Pi)
```




```
> ecdif2:=diff(y(x),x)=1/(1-x^2)*y(x)+1+x
```

$$ecdif2 := \frac{d}{dx}\, y(x) = \frac{y(x)}{-x^2+1} + 1 + x \quad (50)$$

```
> cond_in2:=y(0)=0
```

$$cond\_in2 := y(0) = 0 \quad (51)$$

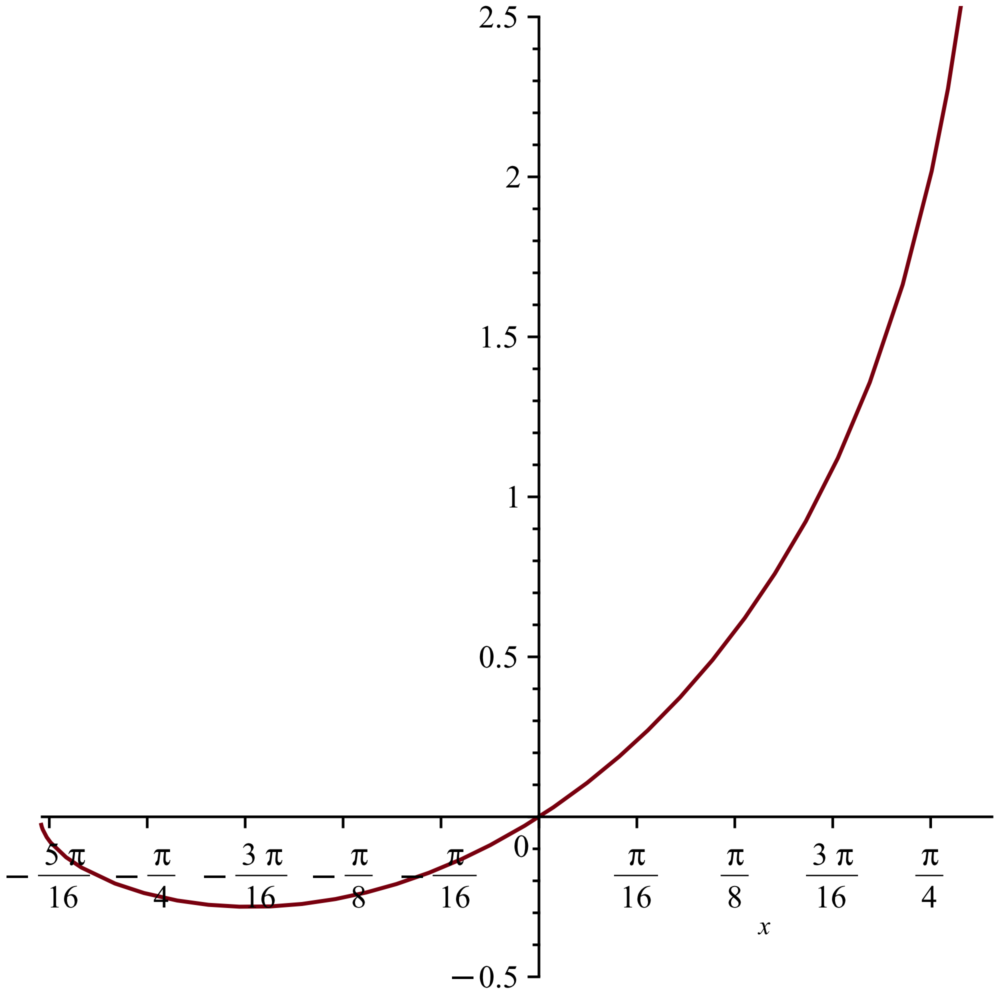
```
> sol2:=dsolve({ecdif2,cond_in2},y(x))
```

$$sol2 := y(x) = \frac{\left(x\sqrt{-x^2+1} + \arcsin(x)\right)(x+1)}{2\sqrt{-x^2+1}} \quad (52)$$

```
> y2:=unapply(rhs(sol2),x)
```

$$y2 := x \mapsto \frac{\left(x\cdot\sqrt{-x^2+1} + \arcsin(x)\right)\cdot(x+1)}{2\cdot\sqrt{-x^2+1}} \quad (53)$$

```
> plot(y2(x),x=-2*Pi..2*Pi)
```




```
> ecdif3:=diff(y(x),x$2)-5*diff(y(x),x)+4*y(x)=0
```

$$ecdif3 := \frac{d^2}{dx^2}\, y(x) - 5\, \frac{d}{dx}\, y(x) + 4\, y(x) = 0 \qquad (54)$$

```
> cond_in3:=y(0)=5
```

$$cond\_in3 := y(0) = 5 \qquad (55)$$

```
> cond_in31:=D(y)(0)=8
```

$$cond\_in31 := \mathrm{D}(y)(0) = 8 \qquad (56)$$

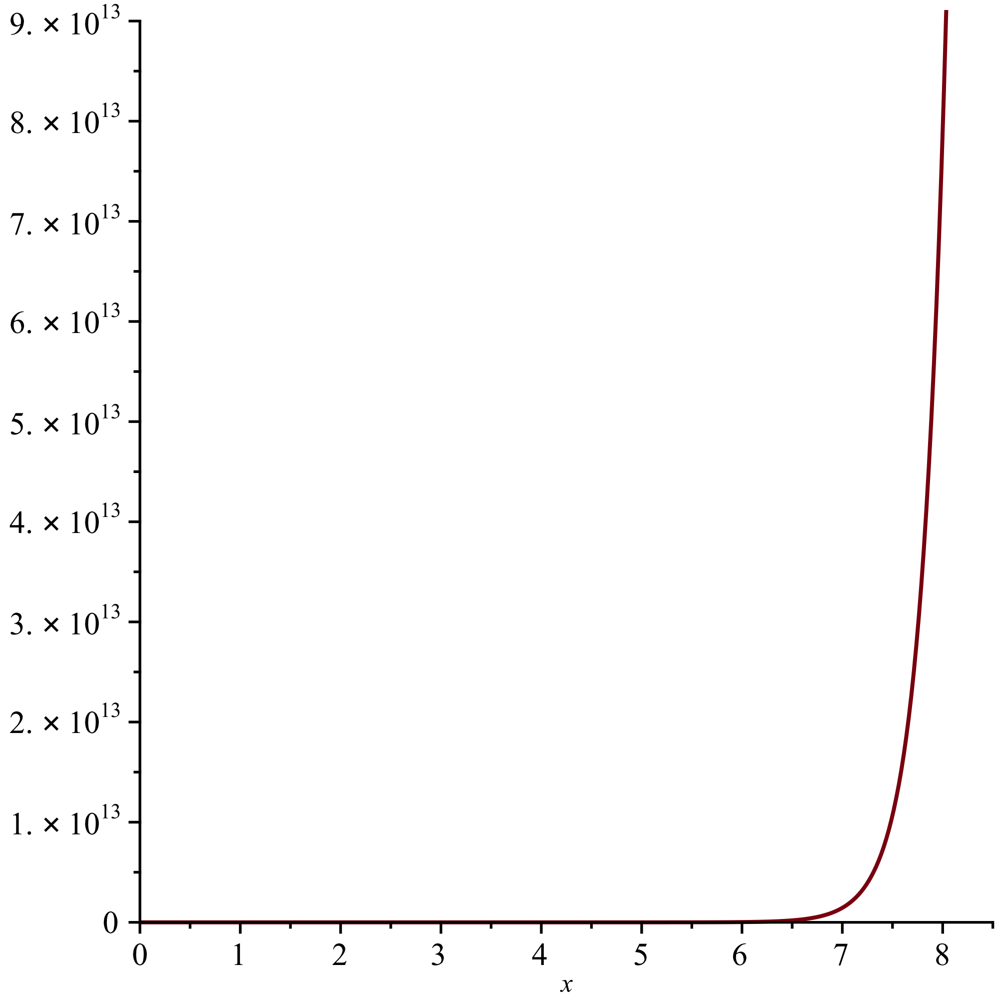
```
> sol3:=dsolve({ecdif3,cond_in3,cond_in31},y(x))
```

$$sol3 := y(x) = 4\, e^{x} + e^{4\, x} \qquad (57)$$

```
> y3:=unapply(rhs(sol3),x)
```

$$y3 := x \mapsto 4 \cdot e^{x} + e^{4 \cdot x} \qquad (58)$$

```
> plot(y3(x),x=0..10)
```




```
> ecdif4:=diff(y(x),x$2)-4*diff(y(x),x)+5*y(x)=2*x^2*exp(x)
```

$$ecdif4 := \frac{d^2}{dx^2}\, y(x) - 4\, \frac{d}{dx}\, y(x) + 5\, y(x) = 2\, x^2\, e^x \quad \textbf{(59)}$$

```
> cond_in4:=y(0)=2
```

$$cond\_in4 := y(0) = 2 \quad \textbf{(60)}$$

```
> cond_in41:=D(y)(0)=3
```

$$cond\_in41 := D(y)(0) = 3 \quad \textbf{(61)}$$

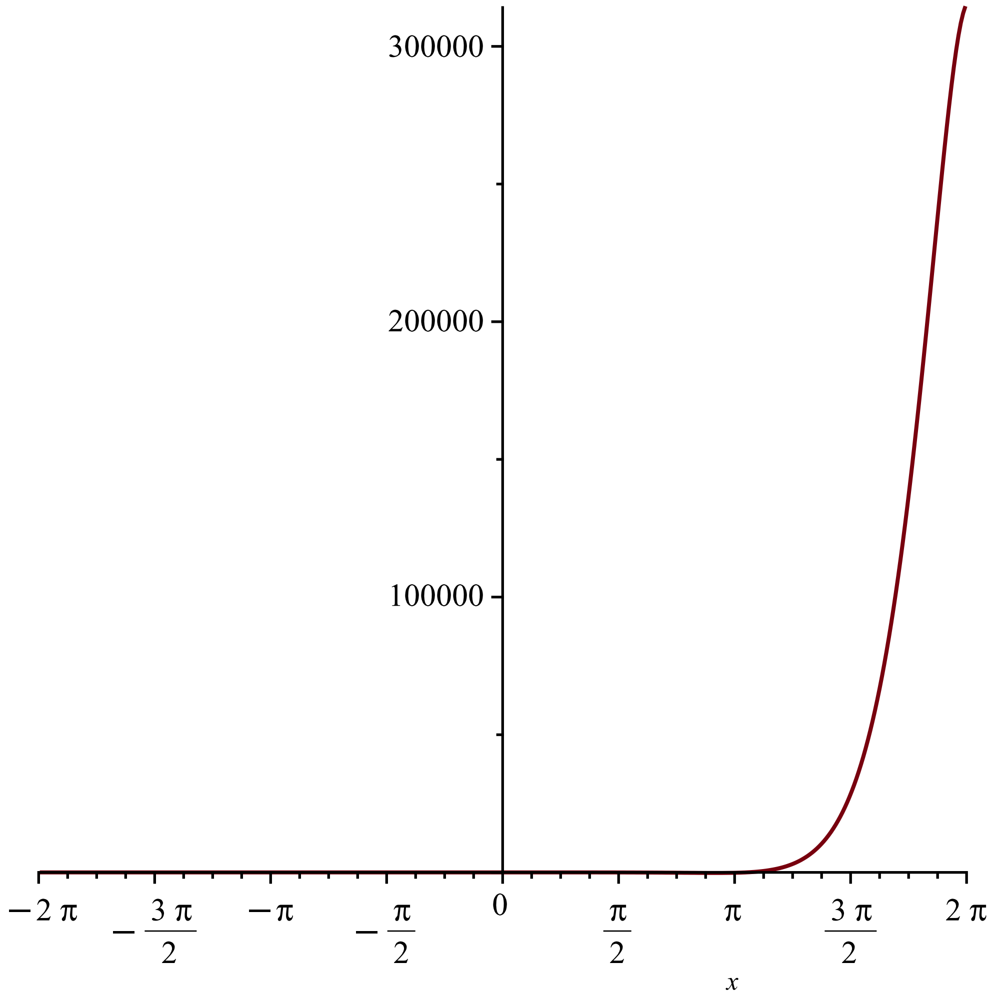
```
> sol4:=dsolve({ecdif4,cond_in4,cond_in41},y(x))
```

$$sol4 := y(x) = (\cos(x) - 2\, \sin(x))\, e^{2\, x} + (x+1)^2\, e^x \quad \textbf{(62)}$$

```
> y4:=unapply(rhs(sol4),x)
```

$$y4 := x \mapsto (\cos(x) - 2\cdot\sin(x))\cdot e^{2\cdot x} + (x+1)^2\cdot e^x \quad \textbf{(63)}$$

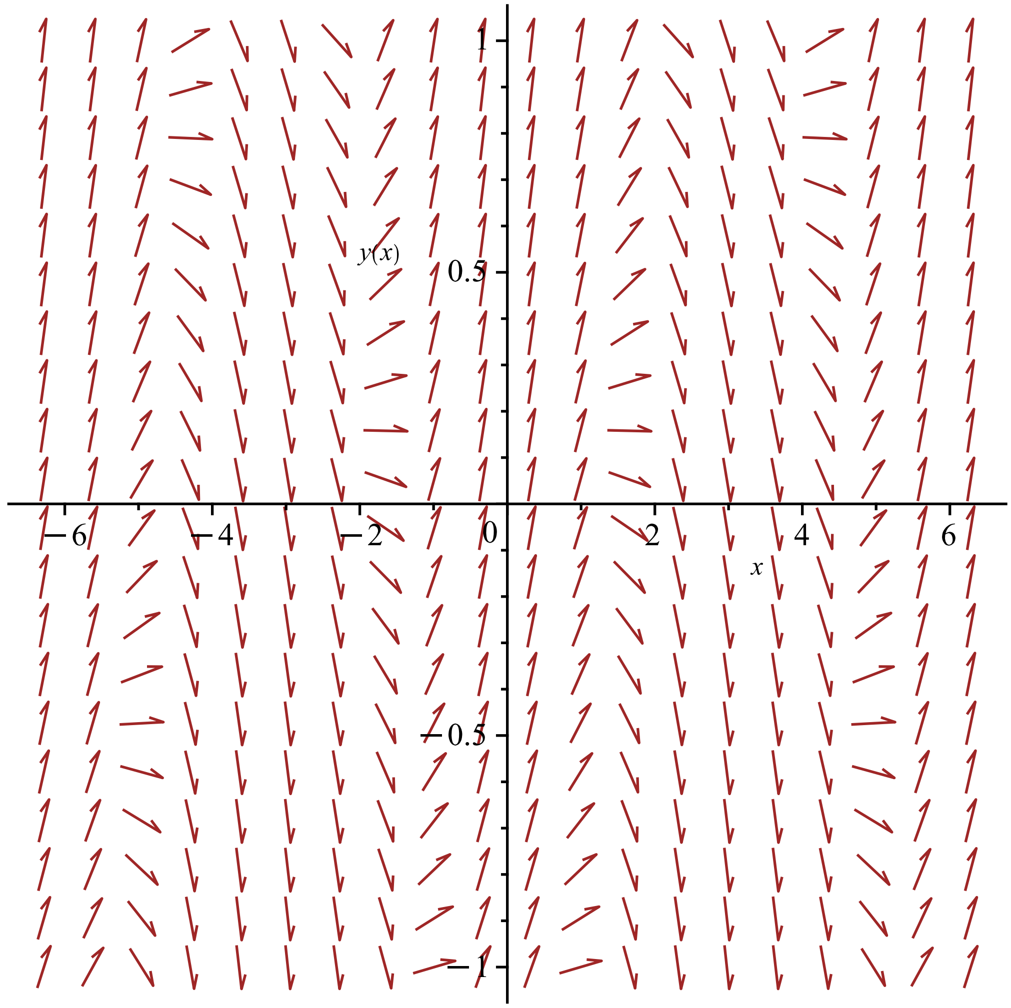
```
> plot(y4(x),x=-2*Pi..2*Pi)
```




```
> restart
> #ex 3:
> with(DEtools): with(plots):
> ecdif:=diff(y(x),x)-1/2*y(x)=cos(x)
```

$$ecdif := \frac{d}{dx}\, y(x) - \frac{y(x)}{2} = \cos(x) \tag{64}$$

```
> DEplot(ecdif,y(x),x=-2*Pi..2*Pi,y=-1..1)
```




```
> cond_in:=y(0)=a
```

$$cond\_in := y(0) = a \tag{65}$$

```
> sol1:=dsolve({ecdif,cond_in},y(x))
```

$$sol1 := y(x) = -\frac{2\cos(x)}{5} + \frac{4\sin(x)}{5} + e^{\frac{x}{2}}\left(a + \frac{2}{5}\right) \tag{66}$$

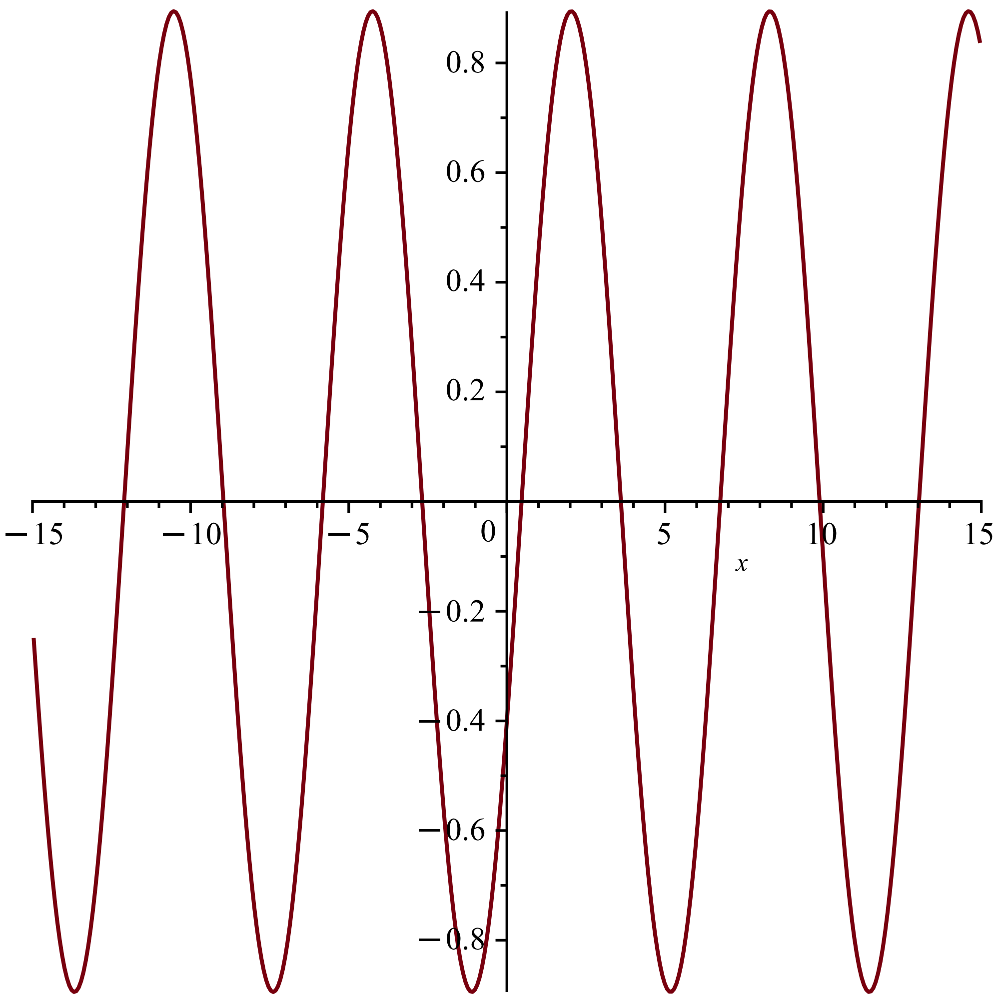
```
> a:=-2/5
```

$$a := -\frac{2}{5} \tag{67}$$

```
> y1:=unapply(rhs(sol1),x)
```

$$y1 := x \mapsto -\frac{2\cdot\cos(x)}{5} + \frac{4\cdot\sin(x)}{5} \tag{68}$$

```
> plot(y1(x),x=-15..15)
```




```
> restart: #ex 4:
> ecdif1:=diff(y(x),x)=aa*y(x)+b
```

$$ecdif1 := \frac{d}{dx} y(x) = aa\, y(x) + b \qquad (69)$$

```
> sol2:=dsolve(ecdif1,y(x))
```

$$sol2 := y(x) = -\frac{b}{aa} + e^{aa\, x} c_1 \qquad (70)$$

```
> y4:=unapply(rhs(sol2),x,c__1)
```

$$y4 := (x, c_1) \mapsto -\frac{b}{aa} + e^{aa \cdot x} \cdot c_1 \qquad (71)$$

```
> cond_in:=y(0)=m
```

$$cond\_in := y(0) = m \qquad (72)$$

```
> sol21:=dsolve({ecdif1,cond_in},y(x))
```

$$sol21 := y(x) = \frac{(m\, aa + b)\, e^{aa\, x} - b}{aa} \qquad (73)$$

```
> m:=5*b/2
```

$$m := \frac{5\, b}{2} \qquad (74)$$

```
> cond_in1:=y(0)=1
```

(75)

$$cond\_in1 := y(0) = 1 \tag{75}$$

```
> sol22:=dsolve({ecdif1,cond_in1},y(x))
```

$$sol22 := y(x) = \frac{e^{aa\,x}\,(aa + b) - b}{aa} \tag{76}$$

```
> y42:=unapply(rhs(sol22),x)
```

$$y42 := x \mapsto \frac{e^{aa \cdot x} \cdot (aa + b) - b}{aa} \tag{77}$$

```
> e1:=y42(2)=2*exp(2)-1
```

$$e1 := \frac{e^{2\,aa}\,(aa + b) - b}{aa} = 2\,e^{2} - 1 \tag{78}$$

```
> e2:=y42(3)=2*exp(3)-1
```

$$e2 := \frac{e^{3\,aa}\,(aa + b) - b}{aa} = 2\,e^{3} - 1 \tag{79}$$

```
> sist:=e1,e2
```

$$sist := e1, e2 \tag{80}$$

```
> #de terminat

> restart: #ex 5:
> ecdif1:=diff(y(x), x$2)-diff(y(x),x)-2*y(x)=0
```

$$ecdif1 := \frac{d^2}{dx^2}\,y(x) - \frac{d}{dx}\,y(x) - 2\,y(x) = 0 \tag{81}$$

```
> cond_in1:=y(0)=a
```

$$cond\_in1 := y(0) = a \tag{82}$$

```
> cond_in2:=D(y) (0)=2
```

$$cond\_in2 := D(y)(0) = 2 \tag{83}$$

```
> sol:=dsolve({ecdif1,cond_in1,cond_in2},y(x))
```

$$sol := y(x) = \frac{(-2 + 2\,a)\,e^{-x}}{3} + \frac{e^{2\,x}\,(a + 2)}{3} \tag{84}$$

```
> limit(sol,x=infinity)
```

$$\lim_{x \to \infty} y(x) = \mathrm{signum}(a + 2)\,\infty \tag{85}$$

```
> a:=-2
```

$$a := -2 \tag{86}$$

```
> limit(sol,x=infinity)
```

$$\lim_{x \to \infty} y(x) = 0 \tag{87}$$

```
> restart:
> #ex 1:
> ec11:=diff(y(x),x$2)+4*y(x)=1/cos(2*x)
```

$$ec11 := \frac{d^2}{dx^2}\,y(x) + 4\,y(x) = \frac{1}{\cos(2\,x)} \tag{88}$$

```
> sol11:=dsolve(ec11,y(x))
```

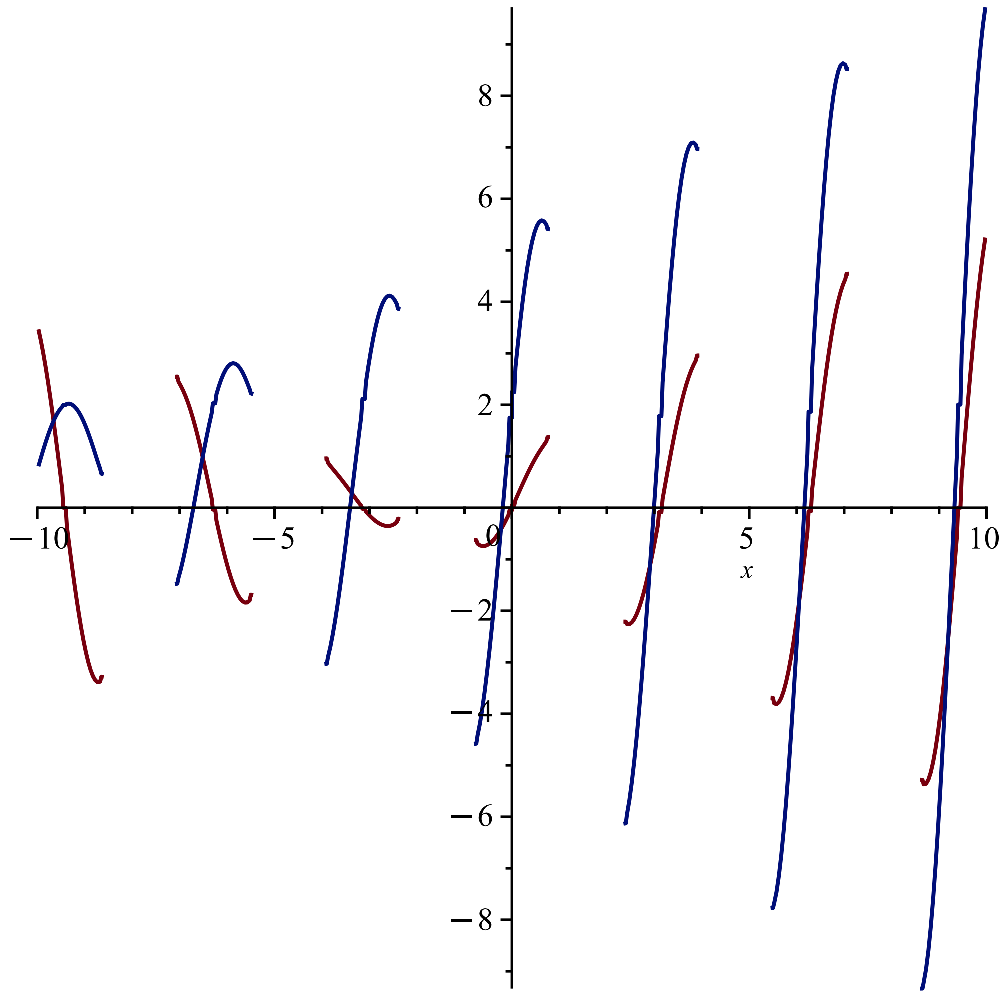
(89)

$$sol11 := y(x) = \sin(2\,x)\;c_2 + \cos(2\,x)\;c_1 + \frac{x\sin(2\,x)}{2} + \frac{\ln(\cos(2\,x))\;\cos(2\,x)}{4} \qquad \textbf{(89)}$$

```
> with(plots):
> y11:=unapply(rhs(sol11),x,c__1,c__2)
```

$$y11 := (x, c_1, c_2) \mapsto \sin(2\cdot x)\cdot c_2 + \cos(2\cdot x)\cdot c_1 + \frac{x\cdot\sin(2\cdot x)}{2} + \frac{\ln(\cos(2\cdot x))\cdot\cos(2\cdot x)}{4} \qquad \textbf{(90)}$$

```
> plot([y11(x,0,1),y11(x,2,5)],x=-10..10)
```




```
> ec12:=diff(y(x),x$2)-diff(y(x),x)=1/(1+exp(x))
```

$$ec12 := \frac{d^2}{dx^2}\;y(x) - \frac{d}{dx}\;y(x) = \frac{1}{1+e^x} \qquad \textbf{(91)}$$

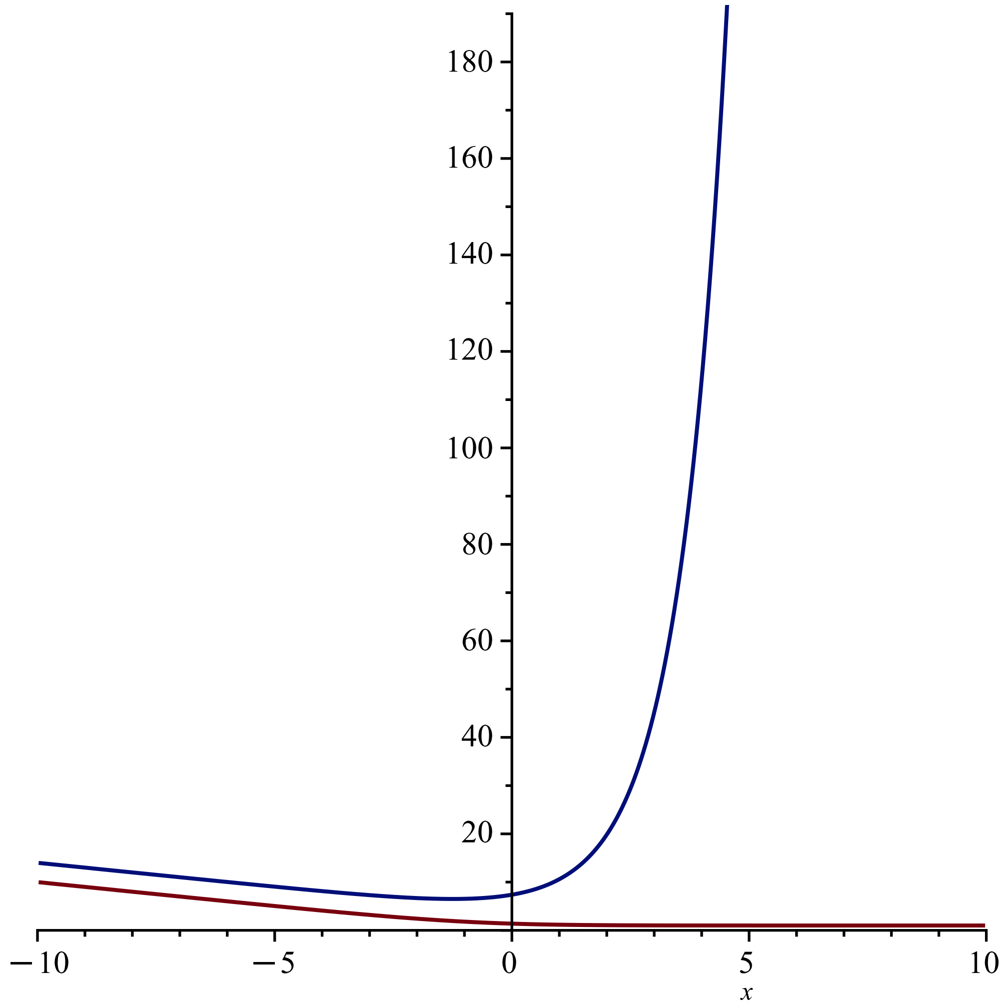
```
> sol12:=dsolve(ec12,y(x))
```

$$sol12 := y(x) = -x + e^x c_1 + \ln(1+e^x)\;(1+e^x) - 1 - e^x\ln(e^x) + c_2 \qquad \textbf{(92)}$$

```
> y12:=unapply(rhs(sol12),x,c__1,c__2)
```

$$y12 := (x, c_1, c_2) \mapsto -x + e^x\cdot c_1 + \ln(1+e^x)\cdot(1+e^x) - 1 - e^x\cdot\ln(e^x) + c_2 \qquad \textbf{(93)}$$

```
> plot([y12(x,0,1),y12(x,2,5)],x=-10..10)
```




```
> #ex 2:
> restart:
> with(DEtools): with(plots):
> ecdif3:=diff(y(x),x)-2*y(x)=-x^2
```

$$ecdif3 := \frac{d}{dx}\, y(x) - 2\, y(x) = -x^2 \tag{94}$$

```
> cond_in3:=y(0)=1/4
```

$$cond\_in3 := y(0) = \frac{1}{4} \tag{95}$$

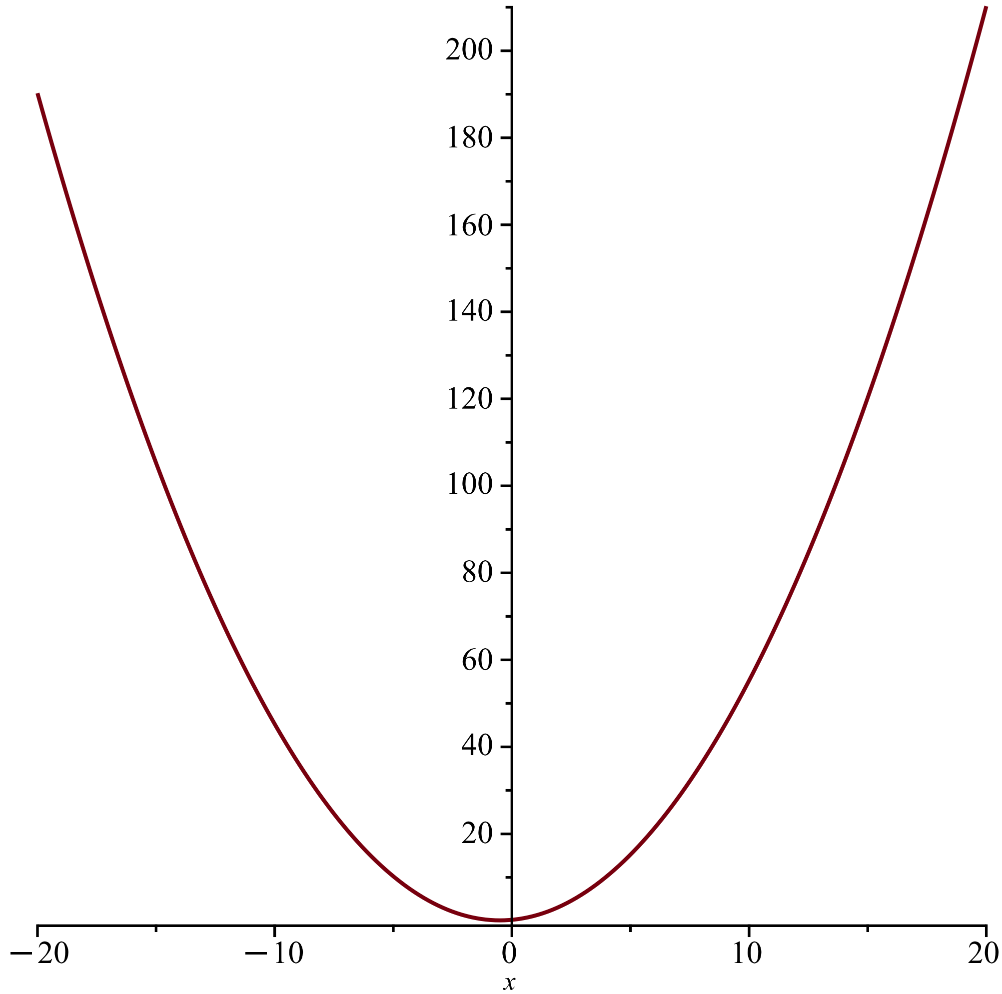
```
> sol3:=dsolve({ecdif3,cond_in3},y(x))
```

$$sol3 := y(x) = \frac{1}{2}\, x^2 + \frac{1}{2}\, x + \frac{1}{4} \tag{96}$$

```
> y3:=unapply(rhs(sol3),x)
```

$$y3 := x \mapsto \frac{1}{2} \cdot x^2 + \frac{1}{2} \cdot x + \frac{1}{4} \tag{97}$$

```
> plot(y3(x),x=-20..20)
```




```
> ecdif6:=diff(y(x),x$2)+4*y(x)=4*(sin(2*x)+cos(2*x))
```

$$ecdif6 := \frac{d^2}{dx^2}\, y(x) + 4\, y(x) = 4 \sin(2\, x) + 4 \cos(2\, x) \qquad (98)$$

```
> cond_in1:=y(Pi)=2*Pi
```

$$cond\_in1 := y(\pi) = 2\,\pi \qquad (99)$$

```
> cond_in2:=D(y)(Pi)=2*Pi
```

$$cond\_in2 := \mathrm{D}(y)(\pi) = 2\,\pi \qquad (100)$$

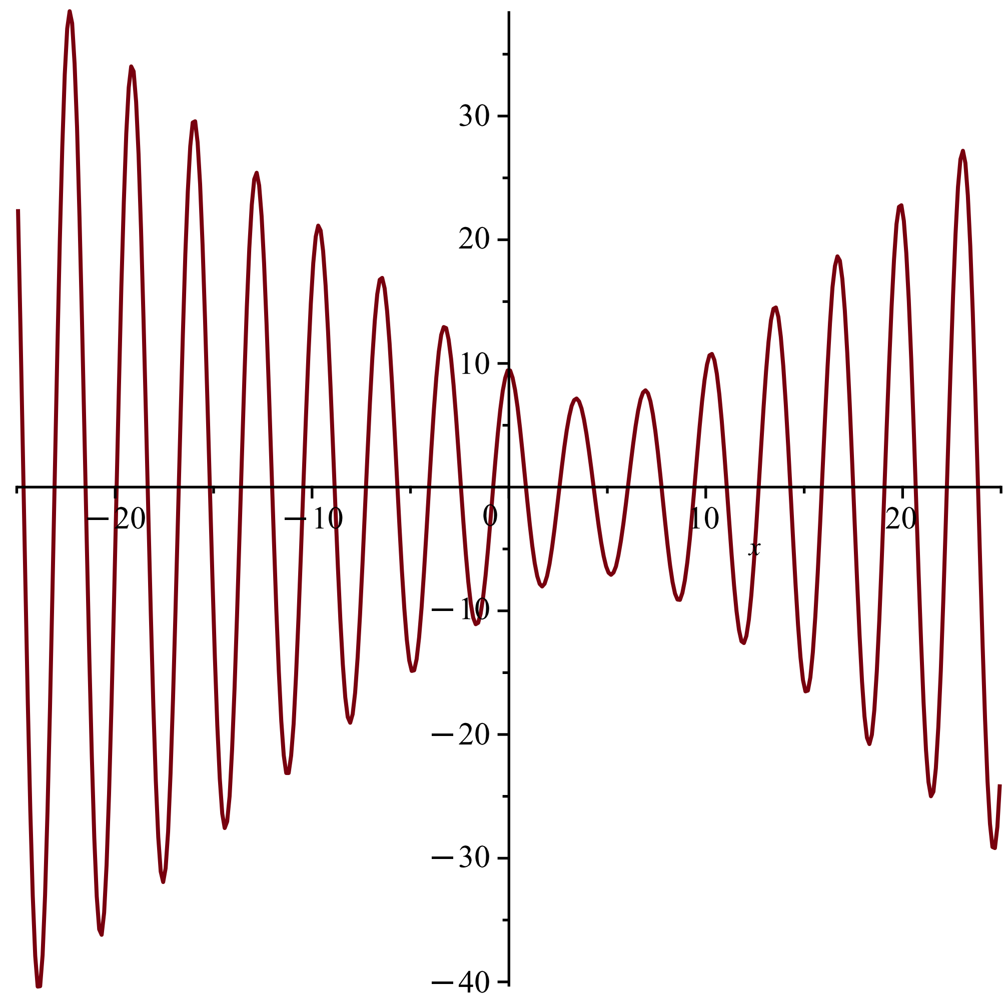
```
> sol6:=dsolve({ecdif6,cond_in1,cond_in2},y(x))
```

$$sol6 := y(x) = (-x + 3\,\pi) \cos(2\, x) + \frac{\sin(2\, x)\ (2\, x + 1)}{2} \qquad (101)$$

```
> y6:=unapply(rhs(sol6),x)
```

$$y6 := x \mapsto (-x + 3 \cdot \pi) \cdot \cos(2 \cdot x) + \frac{\sin(2 \cdot x) \cdot (2 \cdot x + 1)}{2} \qquad (102)$$

```
> plot(y6(x),x=-25..25)
```



30
20
10
0
−10
−20
−30
−40
−20
−10
10
20
x