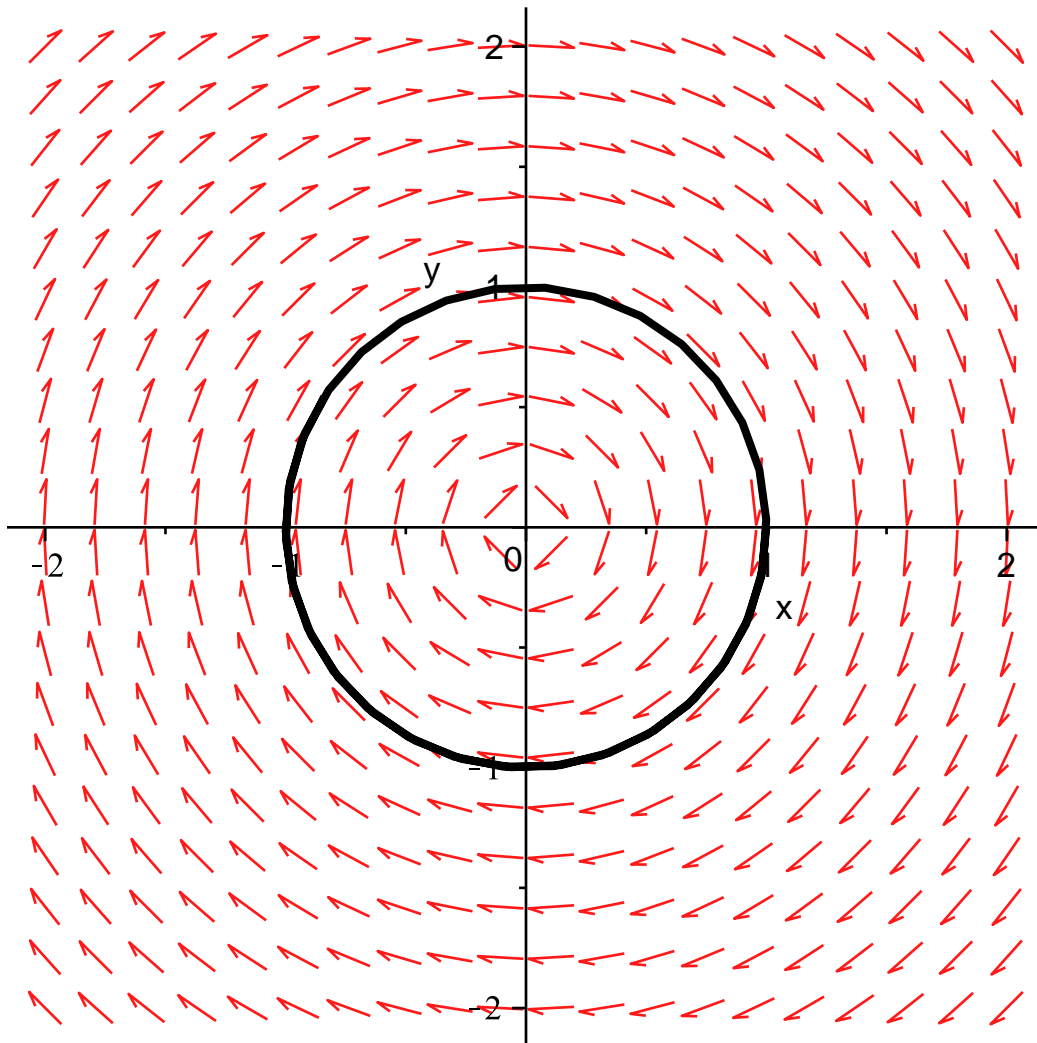
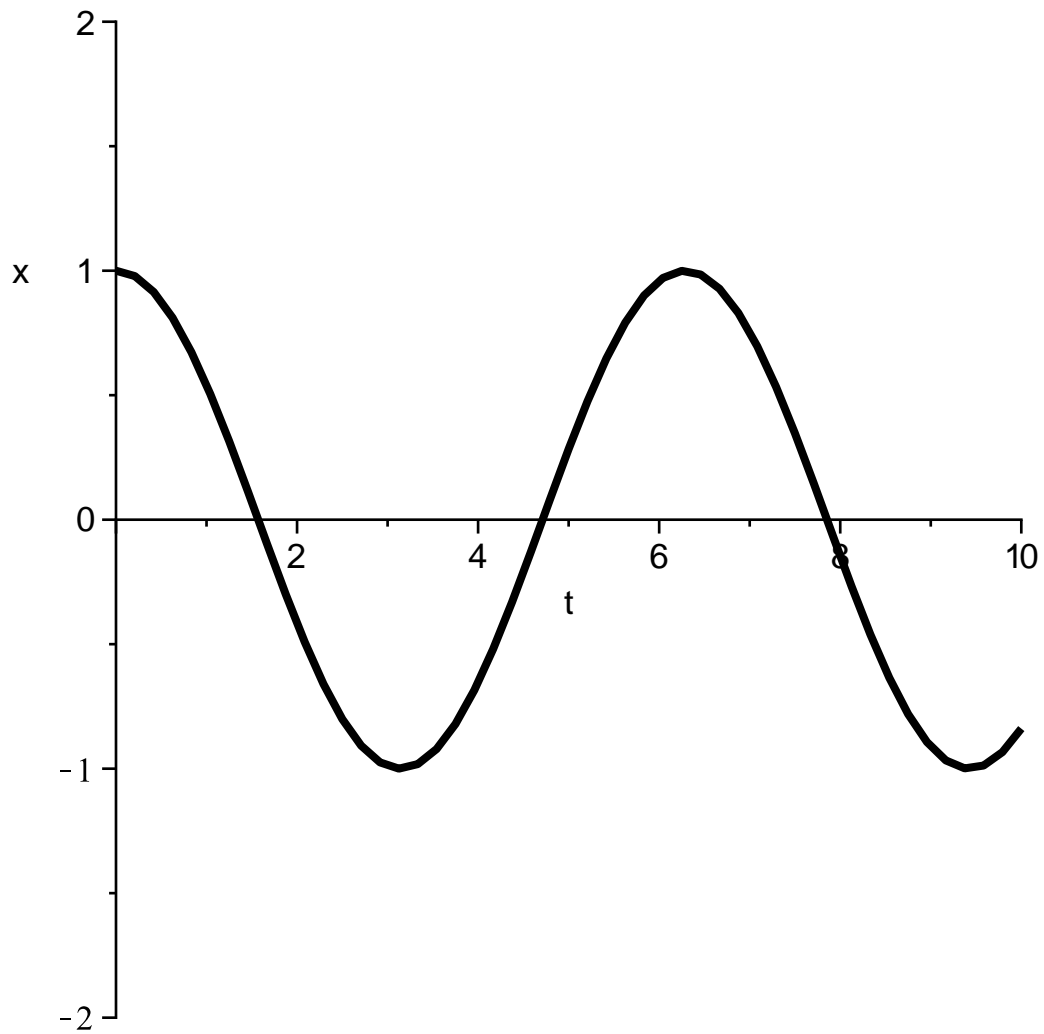


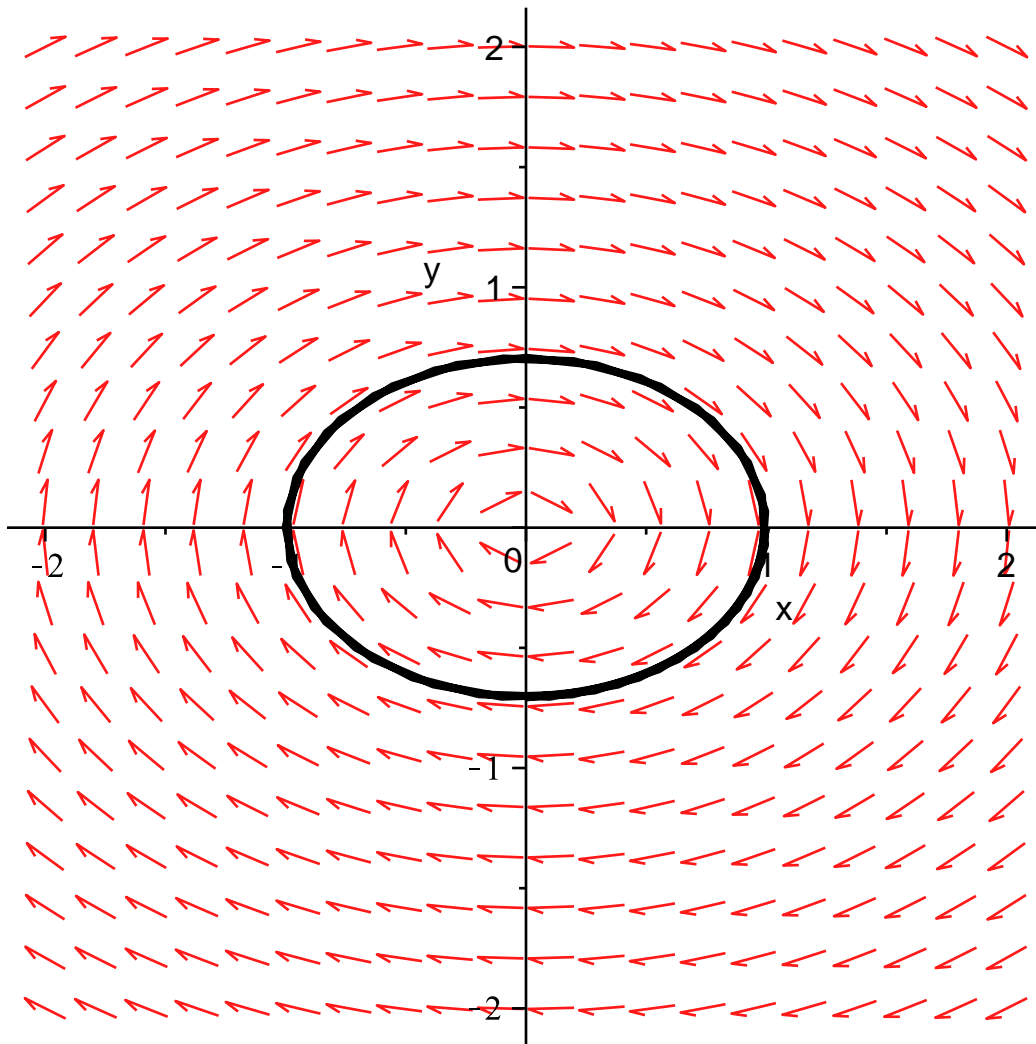
```
> with(DEtools):  
> DEplot( [D(x)(t)=y(t), D(y)(t) = -x(t)], [x,y], t=0..10,  
x=-2..2, y=-2..2,  
[[x(0)=1, y(0)=0]], linecolor=black);
```



```
> DEplot( [D(x)(t)=y(t), D(y)(t) = -x(t)], [x,y], t=0..10,  
x=-2..2, y=-2..2,  
[[x(0)=1, y(0)=0]], linecolor=black, scene=[t,x]);
```



```
> DEplot( [D(x)(t)=2*y(t), D(y)(t) = -x(t)], [x,y], t=0..10,  
x=-2..2, y=-2..2,  
[[x(0)=1, y(0)=0]], linecolor=black);
```



>  $(a-\lambda)(d-\lambda)-b*c=0;$

$$(a-\lambda)(d-\lambda)-bc=0$$

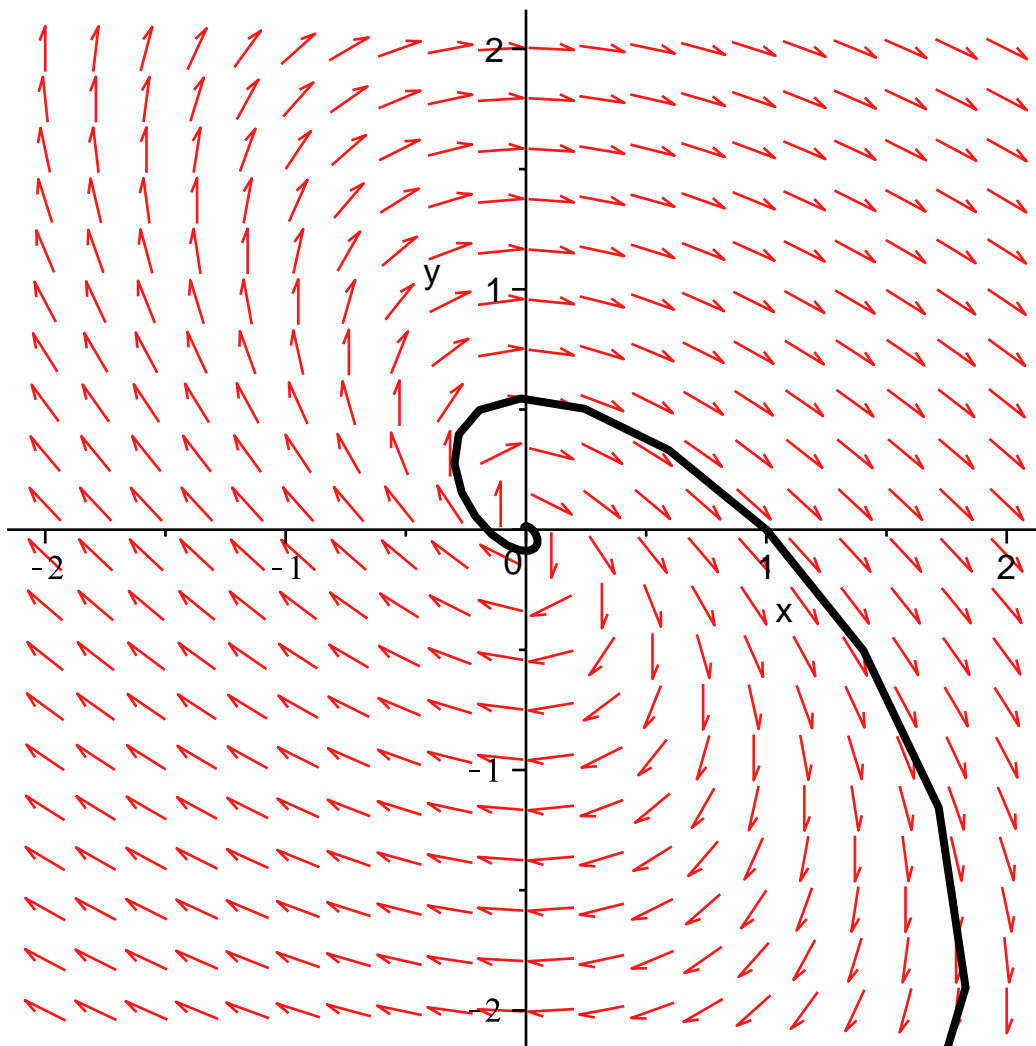
(1)

> `solve(%, lambda);`

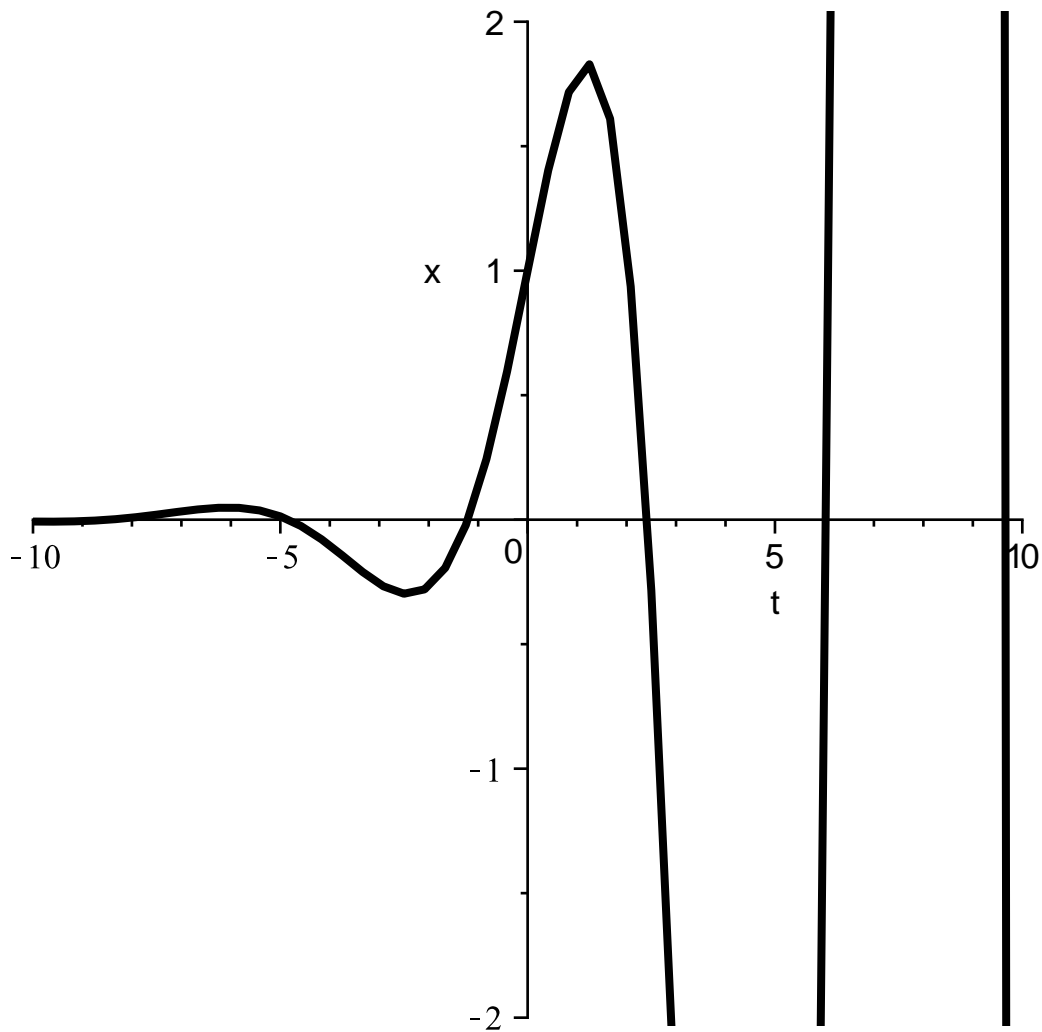
$$\frac{1}{2} a + \frac{1}{2} d + \frac{1}{2} \sqrt{a^2 - 2 a d + d^2 + 4 b c}, \frac{1}{2} a + \frac{1}{2} d - \frac{1}{2} \sqrt{a^2 - 2 a d + d^2 + 4 b c}$$

(2)

> `DEplot( [D(x)(t)=x(t)+y(t), D(y)(t) = -x(t)], [x,y], t=-10..10, x=-2..2, y=-2..2, [[x(0)=1, y(0)=0]], linecolor=black);`



```
> DEplot( [D(x)(t)=x(t)+y(t), D(y)(t) = -x(t)], [x,y], t=-10..10,  
x=-2..2, y=-2..2,  
[[x(0)=1, y(0)=0]], linecolor=black, scene=[t,x], obsrange=  
false);
```



```
> DE:= [D(x)(t) = x(t)^2 + y(t), D(y)(t) = x(t)*(y(t)^2 - 1)];
      DE:= [D(x)(t) = x(t)^2 + y(t), D(y)(t) = x(t) (y(t)^2 - 1)]
```

(3)

```
> solve( { x^2+y=0, x*(y^2-1)=0});
```

```
{x=0,y=0}, {x=1,y=-1}, {x=-1,y=-1}, {x=RootOf(_Z^2+1),y=1}
```

(4)

```
> DEplot(DE, [x,y], t=-10..10,
x=-2..2, y=-2..2);
```

