```
> restart;
> with(plots):
> with(DEtools):
> DE01:=diff(y(t),t)=exp(-2*t)-2*y(t);
```

$$DE01 := \frac{d}{dt} y(t) = e^{-2t} - 2\,y(t) \tag{1}$$

```
> DE02:=diff(y(t),t)=t+2*y(t);
```

$$DE02 := \frac{d}{dt} y(t) = t + 2\,y(t) \tag{2}$$

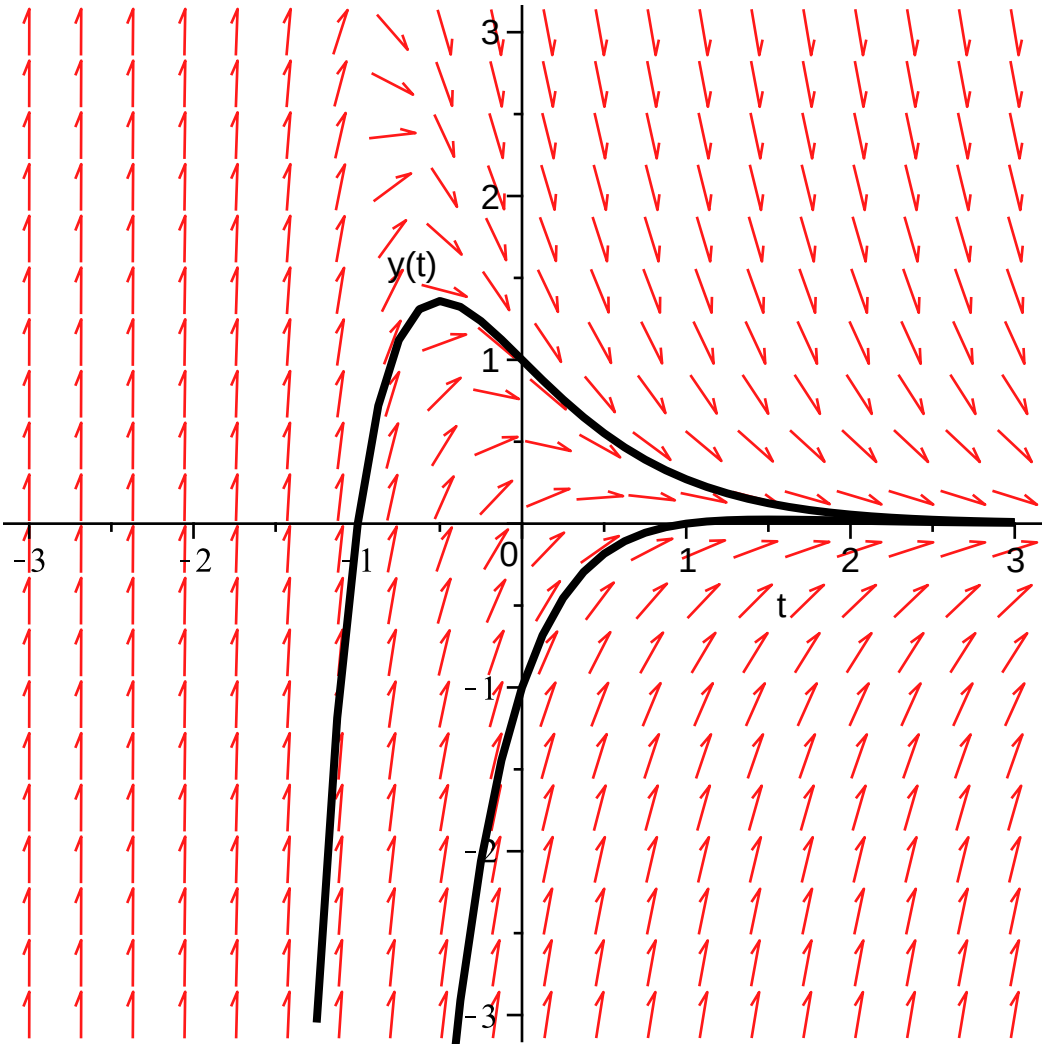
```
> DE03:=diff(y(t),t)=2*t-1-(y(t))^2;
```

$$DE03 := \frac{d}{dt} y(t) = 2\,t - 1 - y(t)^2 \tag{3}$$

```
> DE04:=diff(y(t),t)=(1/6)*(y(t))^3-y(t)-(1/3)*t^2;
```

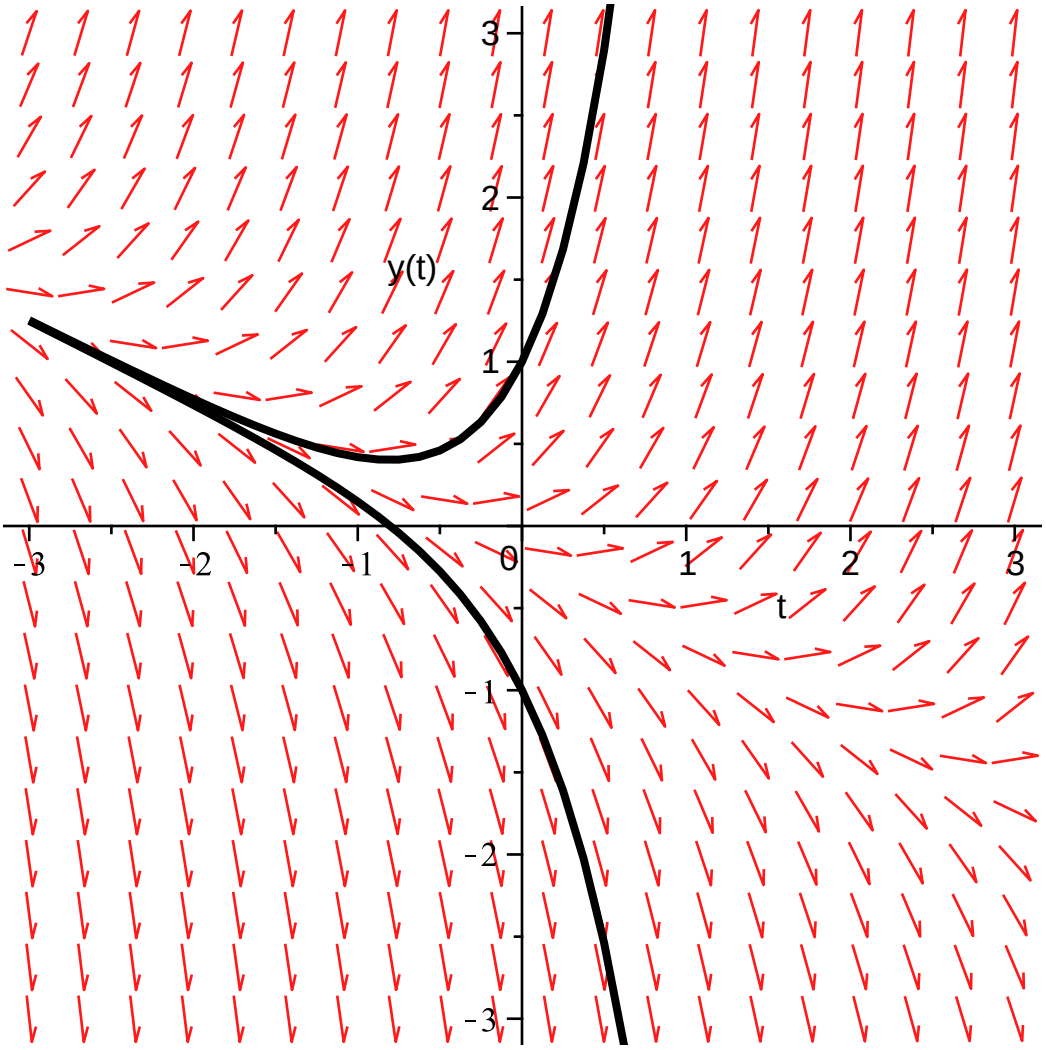
$$DE04 := \frac{d}{dt} y(t) = \frac{1}{6}\,y(t)^3 - y(t) - \frac{1}{3}\,t^2 \tag{4}$$

```
> DEplot(DE01,y(t),t=-3..3,y=-3..3,[[0,1],[0,-1]],linecolor=
  black);
```

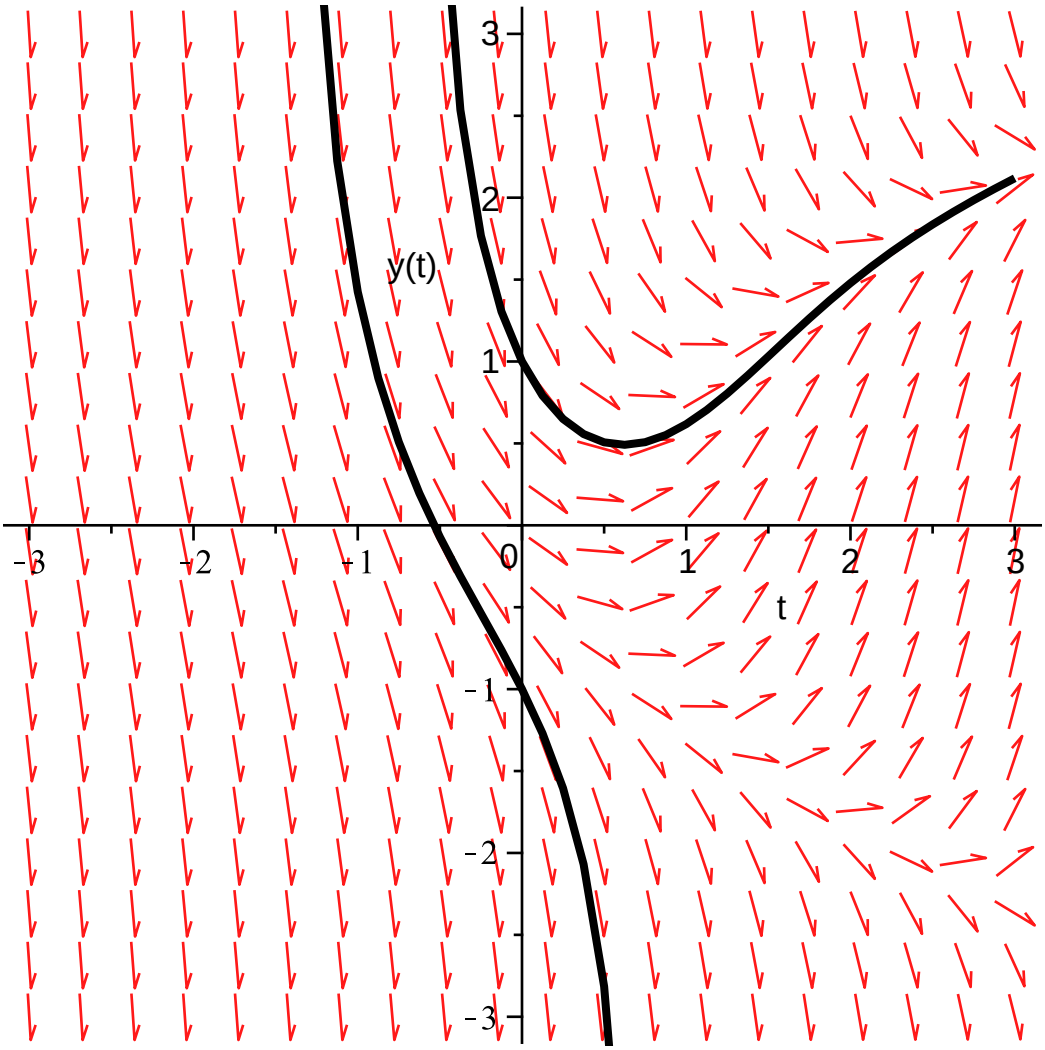



```
> DEplot(DE02,y(t),t=-3..3,y=-3..3,[[0,1],[0,-1]],linecolor=
```

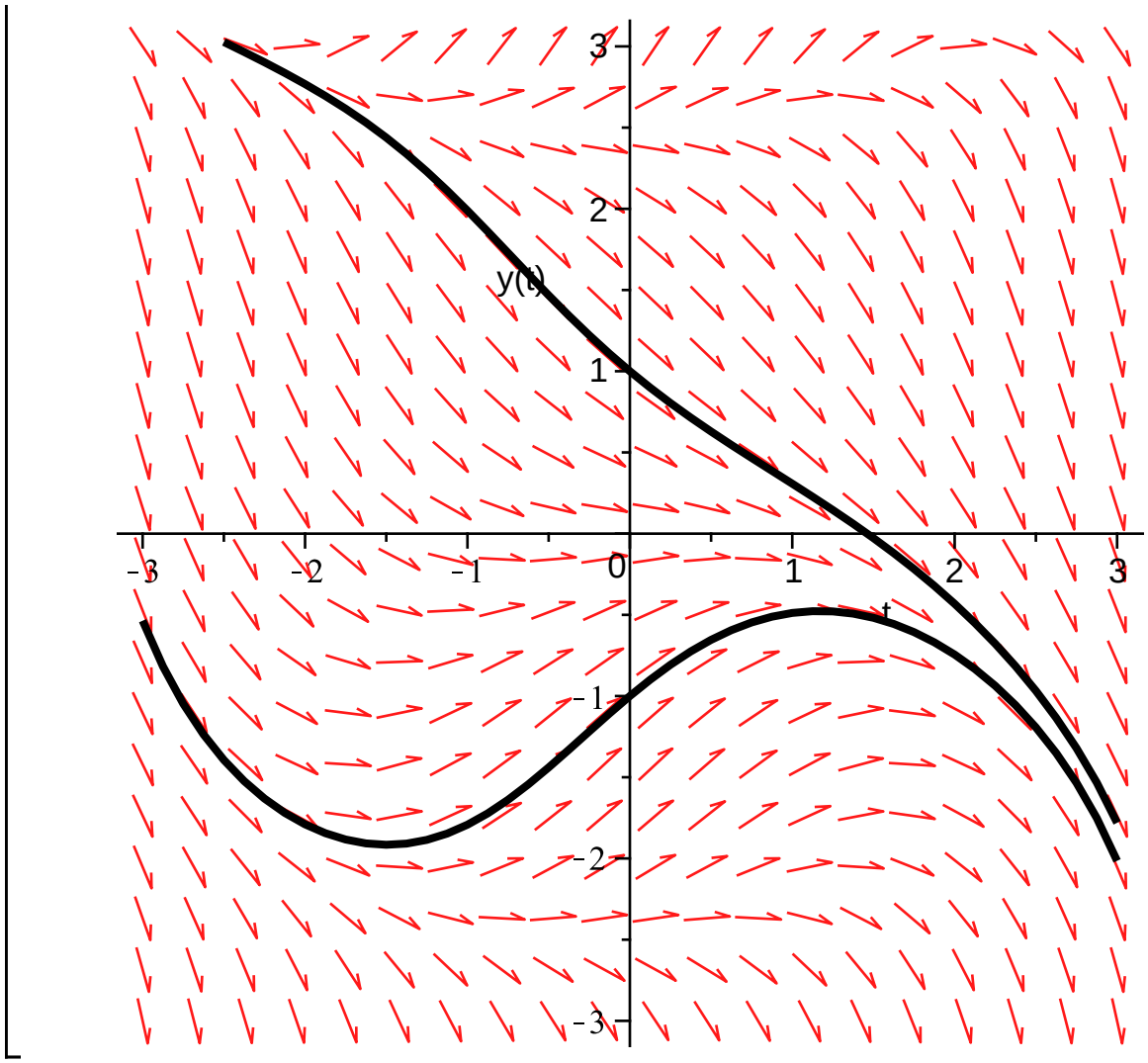
```
black);
```




```
> DEplot(DE03,y(t),t=-3..3,y=-3..3,[[0,1],[0,-1]],linecolor=
black);
```




```
> DEplot(DE04,y(t),t=-3..3,y=-3..3,[[0,1],[0,-1]],linecolor=
  black);
```


3
2
y(t)
1
-3
-2
-1
0
1
2
3
t
-1
-2
-3