

```
> with(DEtools):  
with(plots):
```

First, we'll define the differential equation for Exercises 26, 30 and 31, 32, and then we'll plot them

```
> DE26:=diff(y(t),t)=-2+t-y(t);
```

$$DE26 := \frac{d}{dt} y(t) = -2 + t - y(t) \quad (1)$$

```
> DE30:=diff(y(t),t)=3*sin(t)+1+y(t);
```

$$DE30 := \frac{d}{dt} y(t) = 3 \sin(t) + 1 + y(t) \quad (2)$$

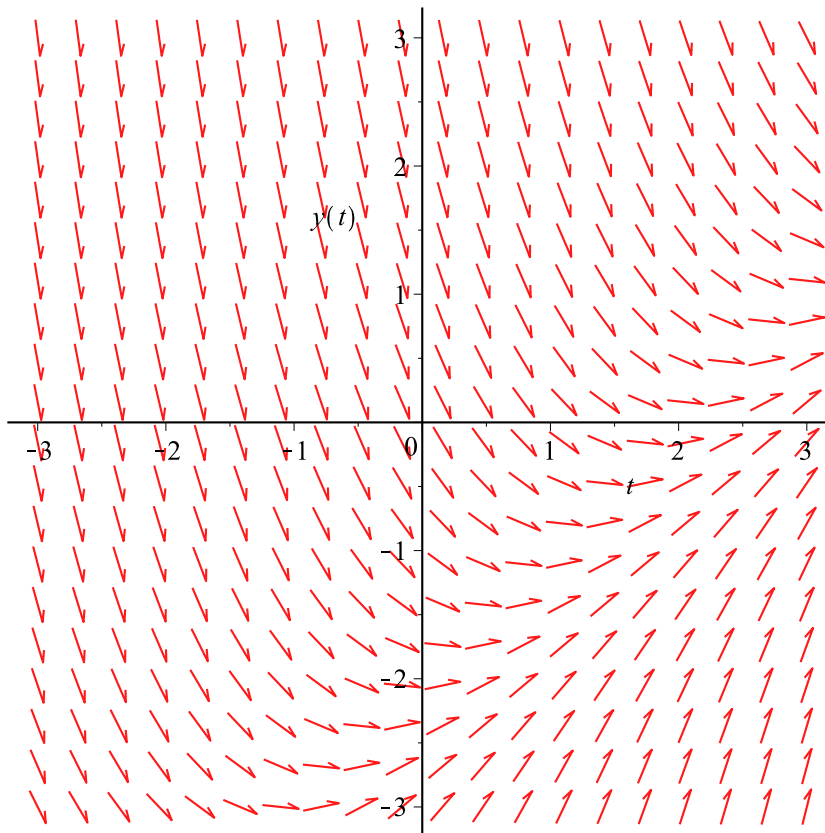
```
> DE31:=diff(y(t),t)=2*t-1-y(t)^2;
```

$$DE31 := \frac{d}{dt} y(t) = 2t - 1 - y(t)^2 \quad (3)$$

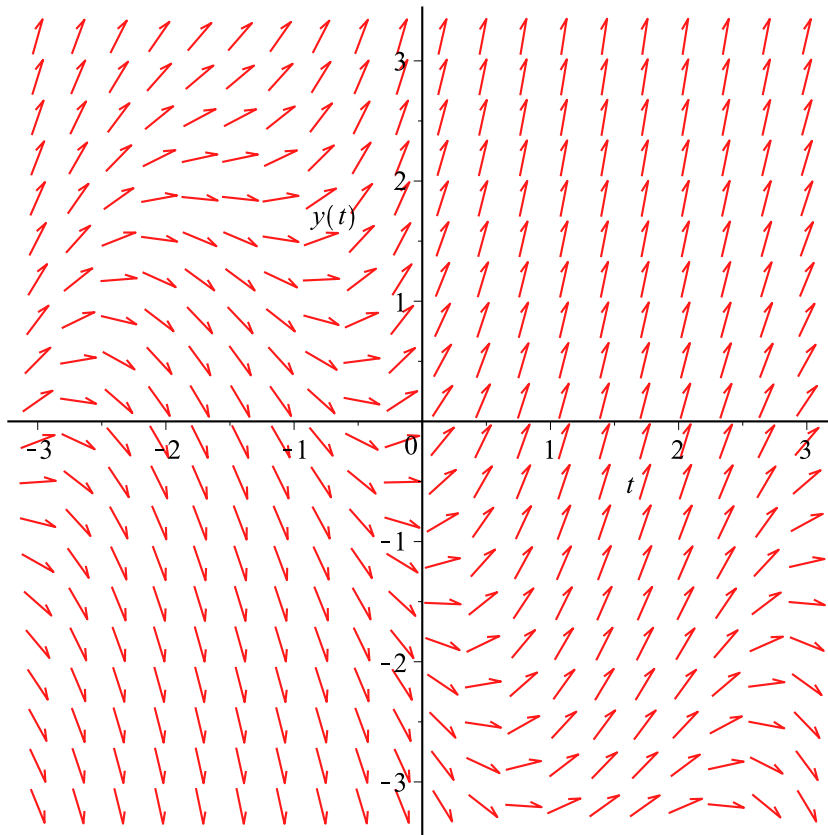
```
> DE32:=diff(y(t),t)=-((2*t+y(t))/(2*y(t)));
```

$$DE32 := \frac{d}{dt} y(t) = -\frac{1}{2} \frac{2t + y(t)}{y(t)} \quad (4)$$

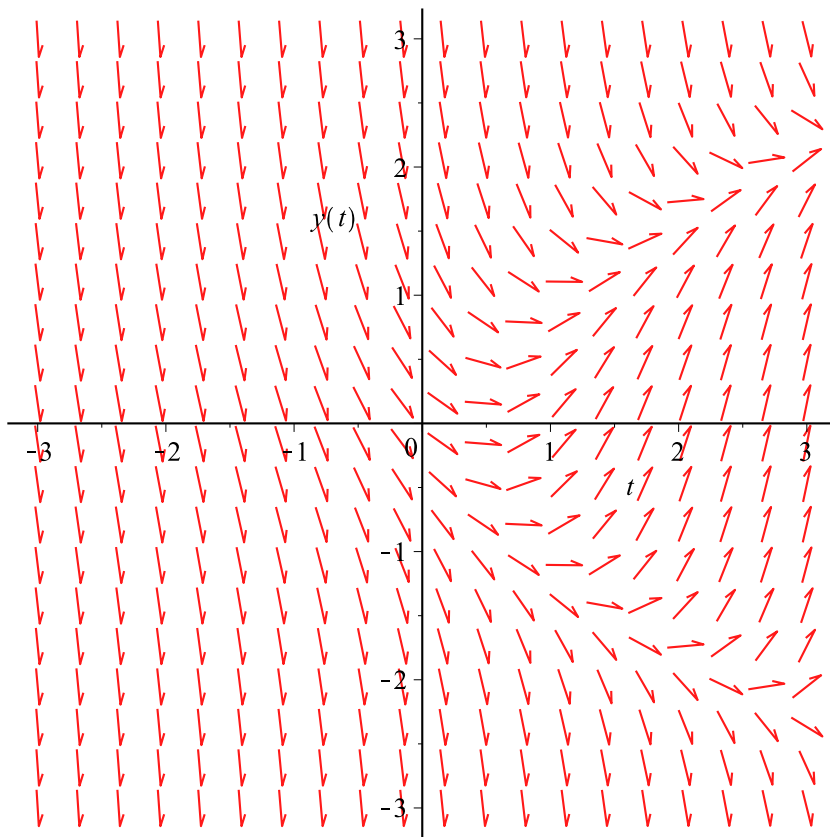
```
> DEplot(DE26,y(t),t=-3..3,y=-3..3);
```



```
> DEplot(DE30,y(t),t=-3..3,y=-3.2..3.2);
```



```
> DEplot(DE31,y(t),t=-3..3,y=-3..3);
```



```
> DEplot(DE32,y(t),t=-3..3,y=-3..3);
```

