

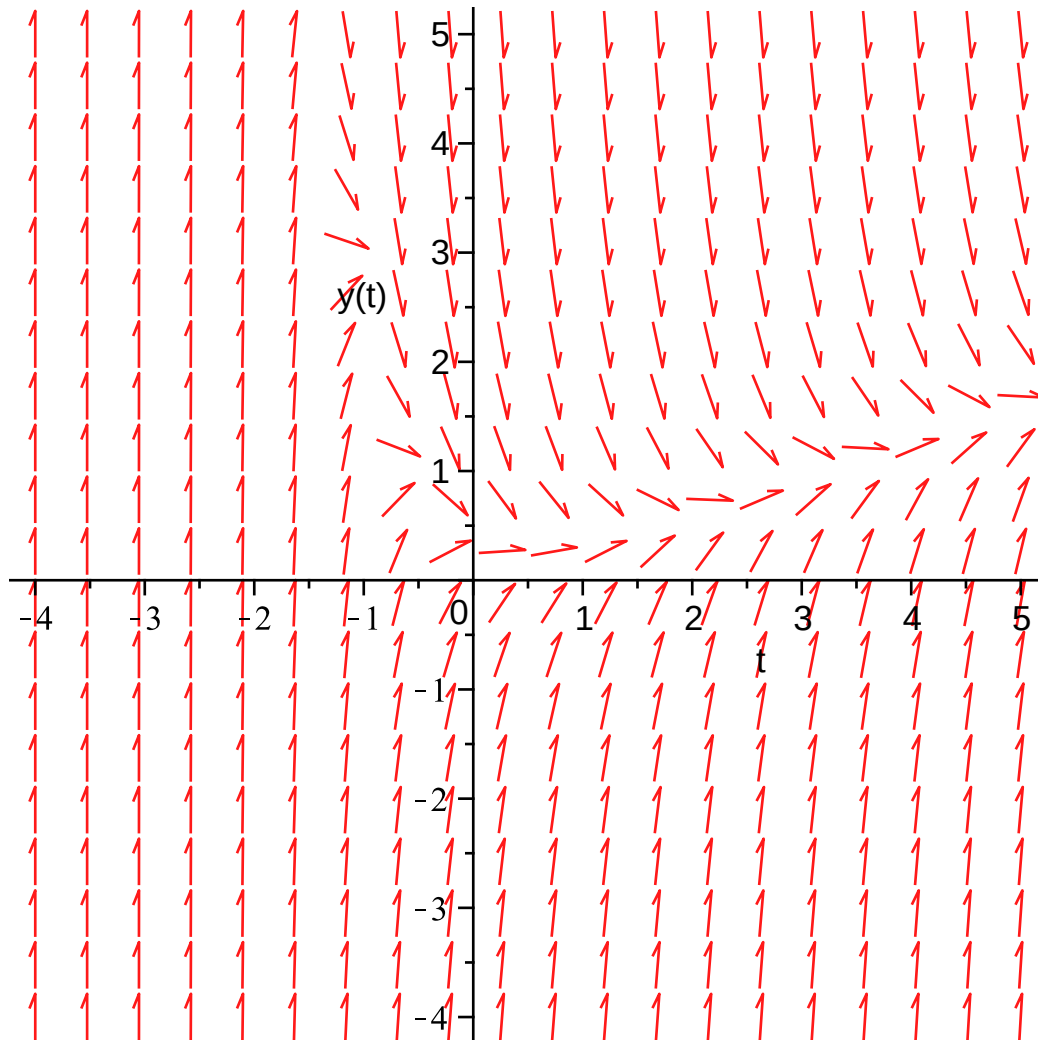
```
> with(DEtools):
```

```
> DE01:=diff(y(t),t)+3*y(t)=t+exp(-2*t);
```

$$DE01 := \frac{d}{dt} y(t) + 3 y(t) = t + e^{-2t}$$

(1)

```
> DEplot(DE01,y(t),t=-4..5,y=-4..5);
```

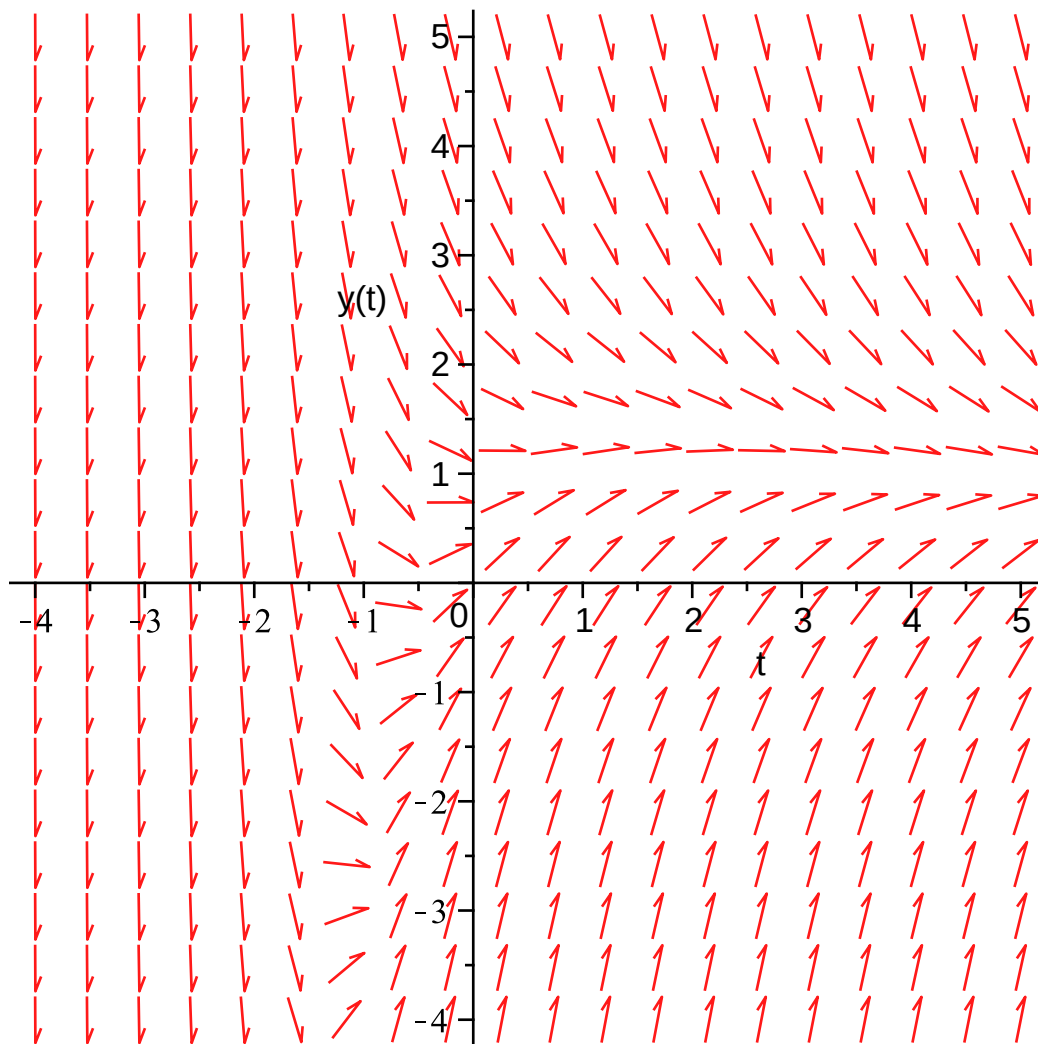


```
> DE03:=diff(y(t),t)+y(t)=t*exp(-t)+1;
```

$$DE03 := \frac{d}{dt} y(t) + y(t) = t e^{-t} + 1$$

(2)

```
> DEplot(DE03,y(t),t=-4..5,y=-4..5);
```

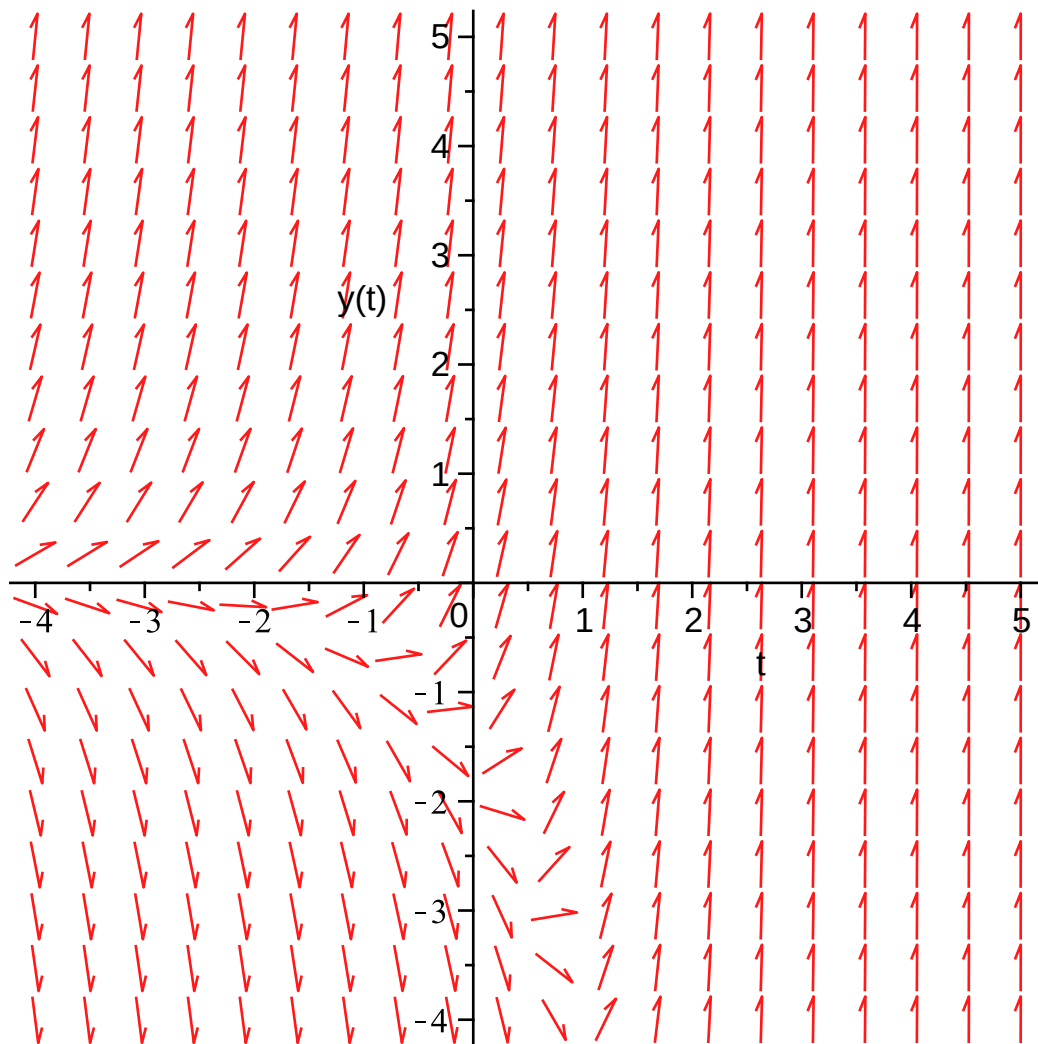


```
> DE05:=diff(y(t),t)-2*y(t)=3*exp(t);
```

$$DE05 := \frac{d}{dt} y(t) - 2y(t) = 3e^t$$

```
> DEplot(DE05,y(t),t=-4..5,y=-4..5);
```

(3)



```
> DE07:=diff(y(t),t)+2*t*y(t)=2*t*exp(-t^2);
```

$$DE07 := \frac{d}{dt} y(t) + 2 t y(t) = 2 t e^{-t^2}$$

(4)

```
> DEplot(DE07,y(t),t=-4..5,y=-4..5);
```

