```
> restart;
> ?DEtools
> f:=(x,y)->0.2*x*y;
```

$$f := (x, y) \rightarrow 0.2\, x\, y \tag{1}$$

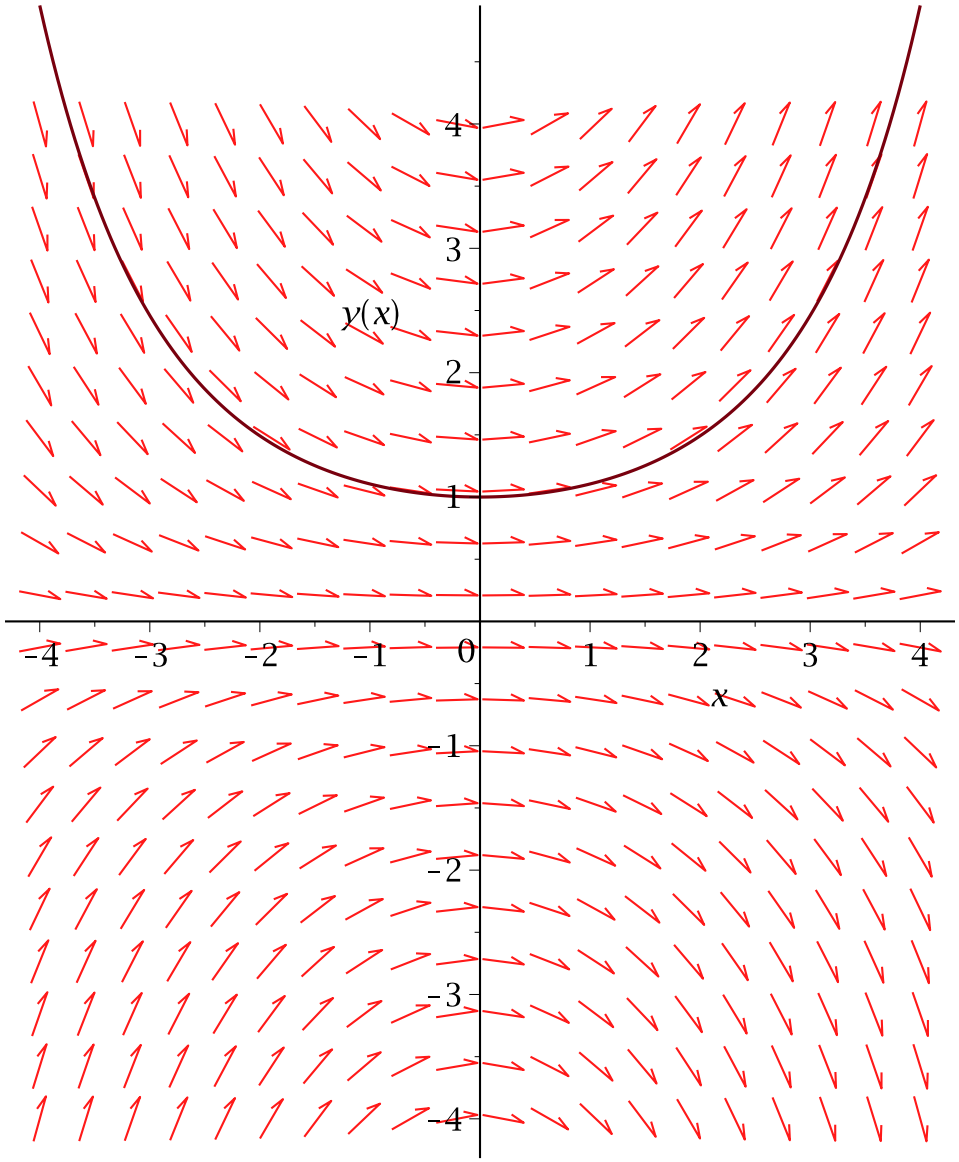
```
> f(4,2);
```

$$1.6 \tag{2}$$

```
> with(DEtools):
  with(plots):
> P1:=dfieldplot(diff(y(x),x)=f(x,y(x)),
     y(x),x=-4..4,y=-4..4):
> s:=x->exp(0.1*x^2);
```

$$s := x \rightarrow e^{0.1\, x^2} \tag{3}$$

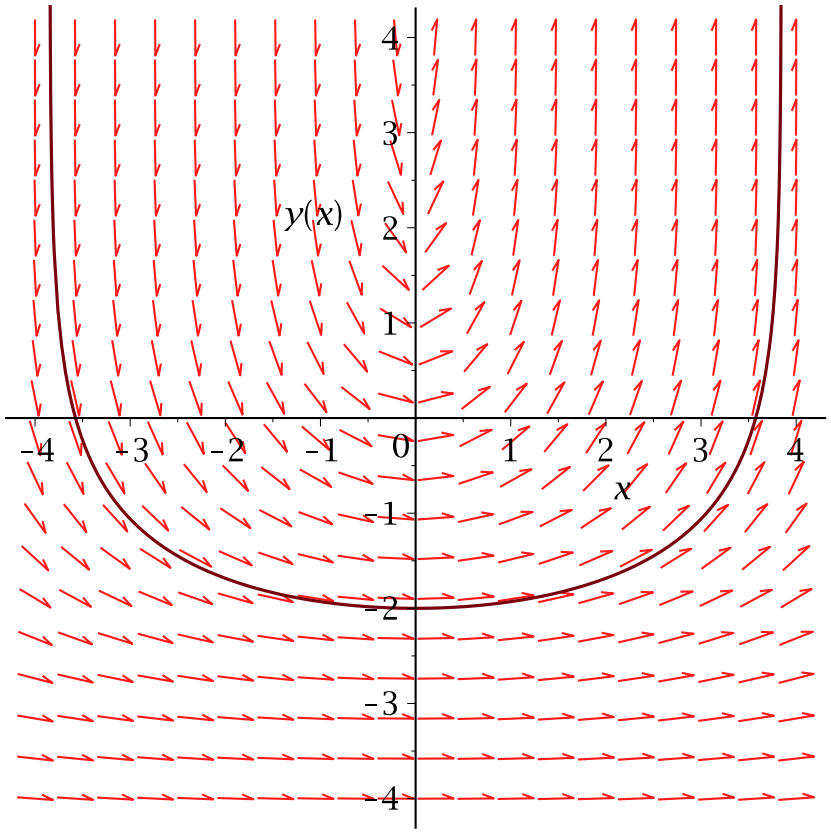
```
> P2:=plot(s(x),x=-4..4):
> display(P1,P2);
```




```
> P3:=dfieldplot(diff(y(x),x)=x*exp(y(x)),
      y(x),x=-4..4,y=-4..4):
> s2:=x->ln(2/(2*exp(2)-x^2));
```

$$s2 := x \to \ln\left(\frac{2}{2\,e^2 - x^2}\right) \tag{4}$$

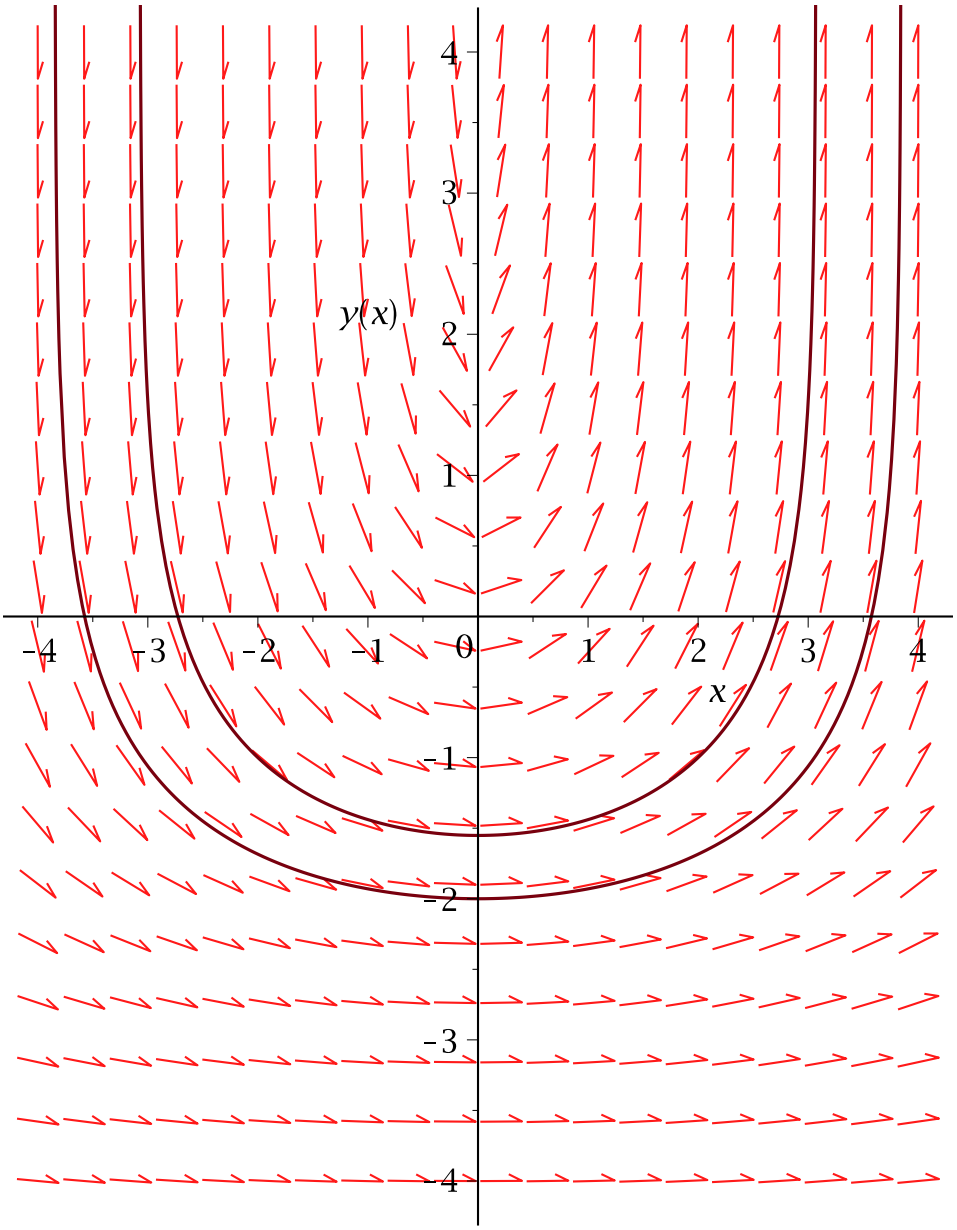
```
> P4:=plot(s2(x),x=-4..4):
> display(P3,P4);
```



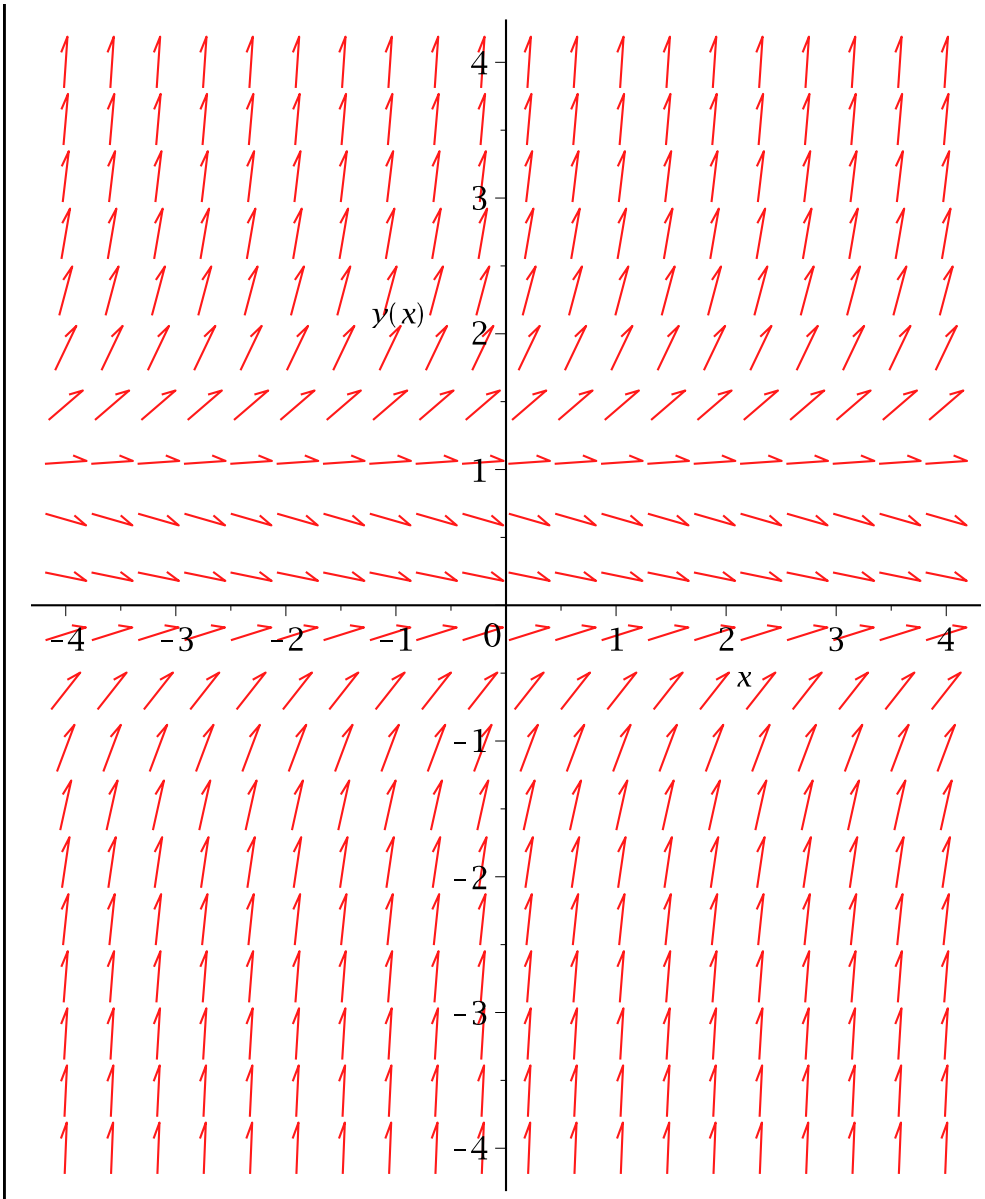

```
> s3:=x->ln(2/(4+2*exp(1)-x^2));
```

$$s3 := x \to \ln\left(\frac{2}{4+2\,e-x^2}\right) \tag{5}$$

```
> P5:=plot(s3(x),x=-4..4):
> display(P3,P5,P4);
```




```
> dfieldplot(diff(y(x),x)=(y(x)-1)*y(x),
      y(x),x=-4..4,y=-4..4);
```


y(x)
x
4
3
2
1
0
-1
-2
-3
-4
-4
-3
-2
-1
1
2
3
4