

```
> Eqn:=y^2-2*y=x^3+2*x^2+2*x+3;
```

$$Eqn := y^2 - 2y = x^3 + 2x^2 + 2x + 3$$

(1)

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

```
> A:=implicitplot(Eqn,x=-3..3,y=-4..1,color=black,thickness=2);
```

A := PLOT(...)

(2)

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

```
> DiffEq:=2*(y(x)-1)*diff(y(x),x)=3*x^2+4*x+2;
```

$$DiffEq := 2(y(x) - 1) \left(\frac{d}{dx} y(x) \right) = 3x^2 + 4x + 2$$

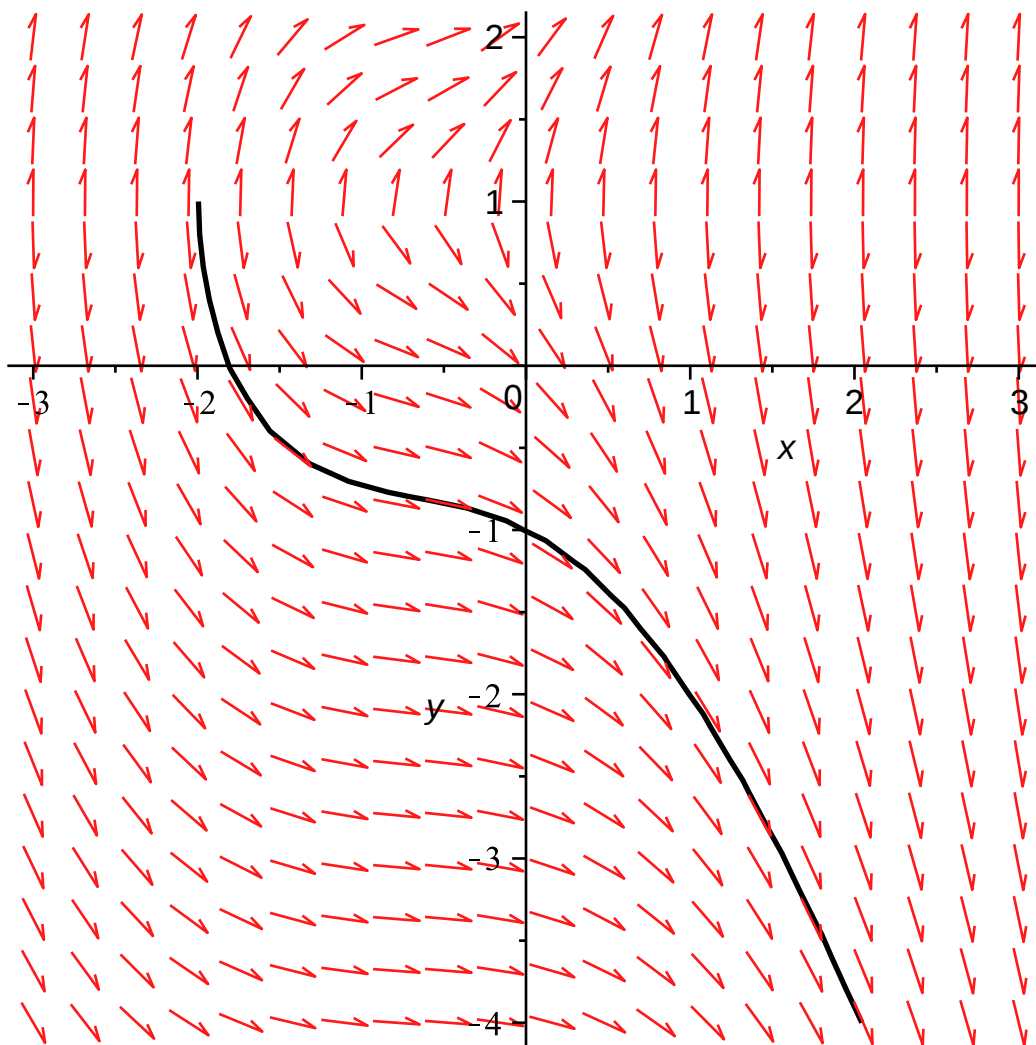
(3)

```
> B:=DEplot(DiffEq,y(x),x=-3..3,y=-4..2);
```

B := PLOT(...)

(4)

```
> display({A,B});
```



```
> Eqn2:=1-sqrt(x^3+2*x^2+2*x+4);
```

$$Eqn2 := 1 - \sqrt{x^3 + 2x^2 + 2x + 4}$$

(5)

```
> C:=plot(Eqn2,x=-3..3,y=-4..2);
```

C := PLOT(...)

(6)

```
> plot(x^3+2*x^2+2*x+4,x=-3..3);
```

