

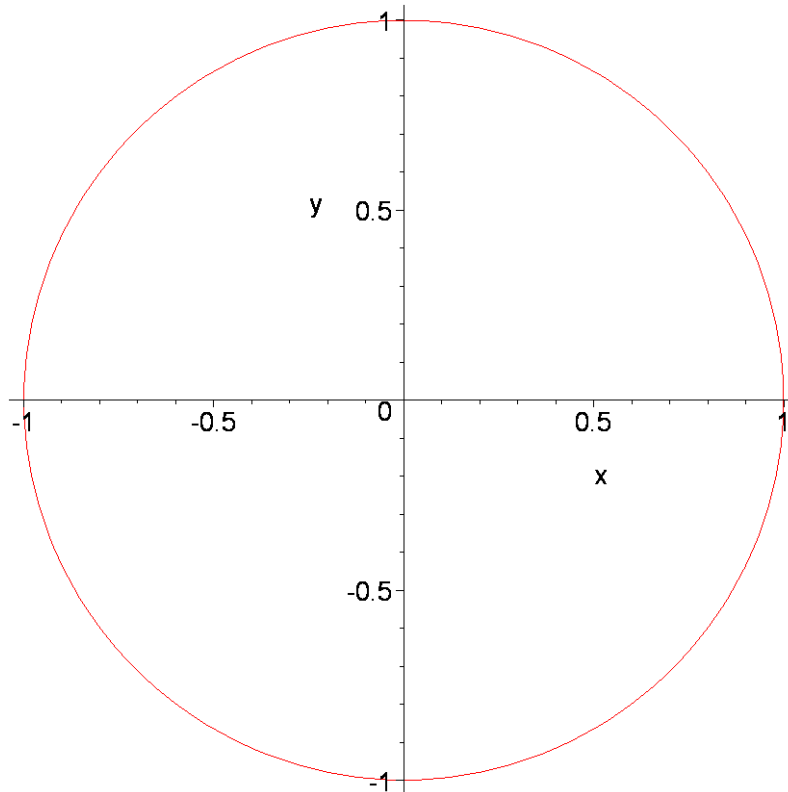
Derivace implicitne zadane funkce

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

```
> f:= (x,y)->x^2+y^2-1;
```

$$f := (x, y) \rightarrow x^2 + y^2 - 1$$

```
> implicitplot(f(x,y),x=-1..1, y=-1..1);
```



```
>
```

```
> rovnice:=D(f(x,y)=0);
```

$$\text{rovnice} := 2 D(x) x + 2 D(y) y = 0$$

```
> kousek:=subs(D(x)=1,rovnice);
```

```
>
```

$$\text{kousek} := 2 x + 2 D(y) y = 0$$

```
> isolate(kousek,D(y));
```

$$D(y) = -\frac{x}{y}$$

... a explicitni reseni:

```
> solve(f(x,y)=0,y);
```

$$\sqrt{-x^2 + 1}, -\sqrt{-x^2 + 1}$$

```
> reseni:=%[1];
```

$$\text{reseni} := \sqrt{-x^2 + 1}$$

```
> diff(reseni,x);
```

|
[>
[>

$$-\frac{x}{\sqrt{-x^2+1}}$$