

If we differentiate an **implicit equation**, this is called *implicit differentiation*.

For example, if $x^2 + y^2 = 4$, we can differentiate both sides with respect to x , using the chain rule, and find that

$$2x + 2y \frac{dy}{dx} = 0.$$

This then rearranges to give $\frac{dy}{dx} = -\frac{x}{y}$.