

Calculus - Chapter 11 - Implicit Differentiation

Definition: $f(x, y) = 0$ defines y implicitly as a function of x , domain for those x where there is a unique y s.t. $f(x, y) = 0$.

Example: $f(x, y) = xy + x - 2y - 1 = 0$

$$x \frac{dy}{dx} + 1 - 2 \frac{dy}{dx} = 0 \Leftrightarrow \frac{dy}{dx} = \frac{1+y}{2-x}.$$