



# Calculus 3 Workbook

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Implicit differentiation

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MATH

## IMPLICIT DIFFERENTIATION

- 1. Use implicit differentiation to find the partial derivative  $dy/dx$ .

$$\sin(x + y) = x + y$$

- 2. Use implicit differentiation to find the partial derivative  $\partial z/\partial x$  of the multivariable function.

$$y \ln z = 2x - 3y + 2z$$

- 3. Use implicit differentiation to find the partial derivative  $\partial z/\partial y$  of the multivariable function.

$$e^z = x^2 + y + z$$



