



ICE - Implicit Differentiation

For each of the following equations, find $\frac{dy}{dx}$.

1. $x \cdot y + 3 \cdot y^2 = 4.$

2. $e^y + 7 \cdot y^2 = \ln(x).$

3. $\ln(y) + 2^x = \frac{1}{y}.$

Answers

1. $\frac{dy}{dx} = \frac{-y}{x + 6 \cdot y}.$

2. $\frac{dy}{dx} = \frac{\frac{1}{x}}{e^y + 14 \cdot y}.$

3. $\frac{dy}{dx} = \frac{\ln(2) \cdot 2^x}{\left(\frac{1}{y} + \frac{1}{y^2}\right)}.$