Calculus	Name _____
Unit 3—Derivatives	Date _____
Implicit differentiation practice	Period _____

- *PROBLEM 1 :* Assume that y is a function of x . Find $y' = dy/dx$ for $x^3 + y^3 = 4$.

- *PROBLEM 2 :* Assume that y is a function of x . Find $y' = dy/dx$ for $(x\text{-}y)^2 = x + y - 1$.

- *PROBLEM 3 :* Assume that y is a function of x . Find $y' = dy/dx$ for $y = \sin(3x + 4y)$.

- *PROBLEM 4 :* Assume that y is a function of x . Find $y' = dy/dx$ for $y = x^2 y^3 + x^3 y^2$.

- *PROBLEM 5 :* Assume that y is a function of x . Find $y' = dy/dx$ for $e^{xy} = e^{4x} - e^{5y}$.

- *PROBLEM 6 :* Assume that y is a function of x . Find $y' = dy/dx$ for $\cos^2 x + \cos^2 y = \cos(2x + 2y)$.