

3.5 Implicit Differentiation

Name:

Date: June 2, 2015

P 2. Find dy/dx .

$$x^2 - y^2 = 25$$

P 4. Find dy/dx .

$$2x^3 + 3y^3 = 64$$

P 6. Find dy/dx .

$$x^2y + y^2x = -2$$

P 10. Find dy/dx .

$$e^{xy} + x^2 - y^2 = 10$$

P 12. Find dy/dx .

$$(\sin \pi x + \cos \pi y)^2 = 2$$

P 16. Find dy/dx .

$$x = \sec \frac{1}{y}$$

P 18. Find dy/dx .

$$\ln xy + 5x = 30$$

P 26. Find dy/dx and evaluate the derivative at $(2, 2)$.

$$y^3 - x^2 = 4$$

P 30. Find dy/dx and evaluate the derivative at $(2, \pi/3)$.

$$x \cos y = 1$$

P 46. Find an equation for the tangent line to the graph of the equation

$$x^2 + xy + y^2 = 4$$

at the point $(2, 0)$.

P 54. Find d^2y/dx^2 .

$$x^2y - 4x = 5$$