

## Ch2 Hwk4 Implicit Differentiation

Date \_\_\_\_\_ Period \_\_\_\_\_

For each problem, use implicit differentiation to find  $\frac{dy}{dx}$  in terms of  $x$  and  $y$ .

1)  $3x^2 = -2y^3 + 3$

2)  $x^2 = (4y^3 + 1)^2$

3)  $4y = x^3 + 4y^3$

4)  $-4xy^2 + 2y^2 = 5x^2$

5)  $\sec y^2 = 5x^2 + 5$

6)  $\cos y^2 = x + 2$

7)  $\tan y^2 = 3x^3 + 1$

8)  $\cot 5y^2 = 4x^2 + 4$