

Name \_\_\_\_\_

Homework 11  
Sections 3.7 & 3.8

1. (4) Find  $\frac{dy}{dx}$  for  $\ln(x + y) = 3xy$ .

2. (6) Find the equation of the tangent line to the curve  $y^2 = \frac{x^2}{xy + 6}$  at the point  $(2, -1)$ .

3. (4) Find  $\frac{dw}{dt}$  for  $w = t^2 \sin w + 3t$ .

4. (3) Determine  $f'(1)$  for  $f(x) = 2 \sinh(x^2)$

5. (3) Determine the derivative of  $g(x) = x^2 \cosh(3x)$ .