

1. Chain Rule:

$$y = (4x + \sqrt{x})^{-4}$$

Find  $\frac{dy}{dx}$

2. Implicit differentiation:

$$7x^2y + 9xy^2 = 8$$

Find  $\frac{dy}{dx}$

Here is a question of the AP Calculus test from a couple of years ago. Refer to the entry task if you need help!

1. Implicit differentiation: Given the following function find the line tangent to at the point (3,1)

$$x^2 + xy - y^2 = 11$$

Step 1: find  $\frac{dy}{dx}$

Step 2: find the slope at the point (3,1)

Step 3: write the equation of the line

How do you feel about finding the tangent line?  
Do you want additional practice?

How do you feel about implicit differentiation?  
Do you want additional practice?