**Mr. Visca’s: Calculus (Chpt 3.7)**

**Chpt 3 – Day 13: Implicit Differentiation**

**3.7 Implicit Differentiation**

Recall that...

* When finding the derivative, we call it \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
  + Therefore, when we solve for the derivative, the solution is stated as \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

So...

* We take derivatives of x's and y's we do it like this:
  + take deriv of y just like an x, except place \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
  + solve for \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
  + dy/dx becomes the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ you are solving for

Example 1: Find dy/dx if y2 = x.

Example 2: Find the slope of the circle x2 + y2 = 25 at the point (3, -4).

Example 3: 2y = x2 + sin y Find y'

Example 4: Find the tangent and normal to the ellipse x2 - xy + y2 = 7 at the point (-1, 2).

Example 5: 2x3 - 3y2 = 8 Find y''

Example 6: x2 -2xy + y2 = 4 Find dy/dx

***HW: Section 3.7***

***Page 162 (3-21, 27-35) multiples of 3 and (49, 56)***