Good Luck!

Nov. 5, 2019 Quiz #5 A

Name _____(please print)

- 1. $x^3 + xy^3 + e^{3y} = 4x + 1$. (Show your work!)
- (4) (a) Calculate y 'at (2, 0). y '=______
- (3) (b) The equation of the tangent line to this curve at (2,0) is L(x) =______
- (2) (c) Use the tangent line in part (b) to approximate y when x=2.04. $y \approx$

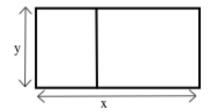
- 2. Use Logarithmic Differentiation to determine a differentiation pattern/rule for $D(F^G)$
- (4) when F and G are functions of x. (Circle your final result.) $D\!\!\left(F^G\right) =$

- 3. (a) True False If f(3) is a max then f'(3) = 0.
 - (b) True False If f'(3) = 0 then f(3) is a max or min of f(x)
 - (c) True False If f'(3) = 2 then f(3) is NOT a max or min of f(x)

(1 each)

4. You have 42 feet of fencing to create the pens shown in the diagram. What dimensions will maximize the total enclosed area?





(4)