

Name: \_\_\_\_\_

Math 1030 Quiz #1 (July 6<sup>th</sup>, 2015)

1. Plot the following data and find the **logarithmic** trendline:

$x =$	1	3	8	20
$y =$	-2	1	5	8

(a) What is the formula for your trendline? \_\_\_\_\_

(b) What is  $R^2$  for this model? \_\_\_\_\_

(c) What does your model predict when  $x = 100$ ? \_\_\_\_\_

2.  $y_1 = -2x^2 + 1$  and  $y_2 = e^{-x} - 3$ .

(a) Using Goal Seek, find a positive  $x$  such that  $y_1 = -5$ .

$y_1 = -5$  when  $x =$  \_\_\_\_\_

(b) Find a point where  $y_1$  and  $y_2$  cross. (There is a solution between  $0 \leq x \leq 2$ .)

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