Name: _____ **Math 1030 Quiz #1 8am** (July 5th, 2013)

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

$x =$	1	4	9	16
$y =$	7	7	-33	-173

   (a) What is the formula for your trendline? _____

   (b) What is R^2 for this model? _____

   (c) What does your model predict when $x = 25$? _____

2. $y_1 = \ln(x^2 + 1)$ and $y_2 = e^{-x}$.

   (a) Using Goal Seek, find a positive x such that $y_1 = \ln(x^2 + 1) = 1$.

   $y_1 = 1$ when $x =$ _____

   (b) Where do y_1 and y_2 cross? (Find a solution between $0 \leq x \leq 2$.)

Name: _____ **Math 1030 Quiz #1 10am** (July 5th, 2013)

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

$x =$	-4	-1	0	4
$y =$	-33	-3	3	7

   (a) What is the formula for your trendline? _____

   (b) What is R^2 for this model? _____

   (c) What does your model predict when $x = 10$? _____

2. $y_1 = xe^{-x/2}$ and $y_2 = x - 2$. (In each part, find **one** solution between $0 \leq x \leq 5$.)

   (a) Using Goal Seek, find a positive x such that $y_1 = xe^{-x/2} = 0.5$.

   $y_1 = 0.5$ when $x =$ _____

   (b) Where do y_1 and y_2 cross?

   $(x, y) =$ _____