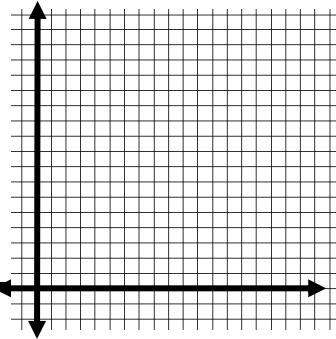
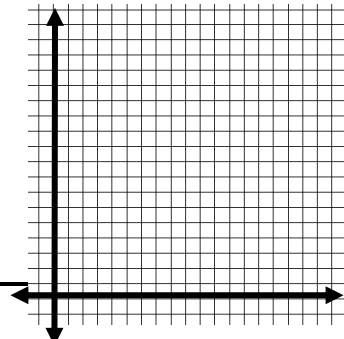
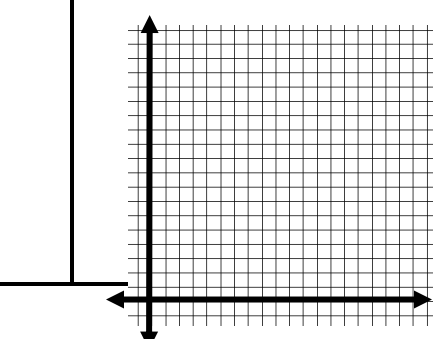


Functions Day 5: Homework

Comparing Functions in Different Representations

1) Come up with your own scenarios, and then fill in the tables and sketch a graph each function.

	Linear Situation	Quadratic Situation	Exponential Situation																																										
Scenario (if you need more room for these, just attach a separate piece of paper)																																													
Equation	$y = 100x + 200$	$y = -4x^2 + 4x + 10$	$y = 1150(0.78)^x$																																										
Table (make sure your first row is labels)	<table border="1" style="width: 100%; height: 100%; border-collapse: collapse;"> <tr><td style="width: 50%;"></td><td style="width: 50%;"></td></tr> <tr><td></td><td></td></tr> <tr><td></td><td></td></tr> <tr><td></td><td></td></tr> <tr><td></td><td></td></tr> <tr><td></td><td></td></tr> <tr><td></td><td></td></tr> </table>															<table border="1" style="width: 100%; height: 100%; border-collapse: collapse;"> <tr><td style="width: 50%;"></td><td style="width: 50%;"></td></tr> <tr><td></td><td></td></tr> <tr><td></td><td></td></tr> <tr><td></td><td></td></tr> <tr><td></td><td></td></tr> <tr><td></td><td></td></tr> <tr><td></td><td></td></tr> </table>															<table border="1" style="width: 100%; height: 100%; border-collapse: collapse;"> <tr><td style="width: 50%;"></td><td style="width: 50%;"></td></tr> <tr><td></td><td></td></tr> <tr><td></td><td></td></tr> <tr><td></td><td></td></tr> <tr><td></td><td></td></tr> <tr><td></td><td></td></tr> <tr><td></td><td></td></tr> </table>														
Graph (this is just a quick sketch, not 5 points)																																													

Functions Day 5: Homework

Do all of the following for each question below(#2-6):

- A) Determine which type of function each situation described below would be modeled by.
 B) Circle the word(s) in the scenario that helped you make your decision. (you can explain in words if you can't find a key word)

2) The average annual cost of car insurance in the Philippines is initially 50,000 Philippine pesos. Each year it decreases by 4,000 pesos, if you don't have any accidents.

Linear Quadratic Exponential Other (circle one)

3) You have a car loan that has an interest rate of 4% per year.

Linear Quadratic Exponential Other (circle one)

4) A person starts off a race increasing their speed at a constant rate, then plateaus their speed for the majority of the race, then speeds up at the end once the finish line is in sight.

Linear Quadratic Exponential Other (circle one)

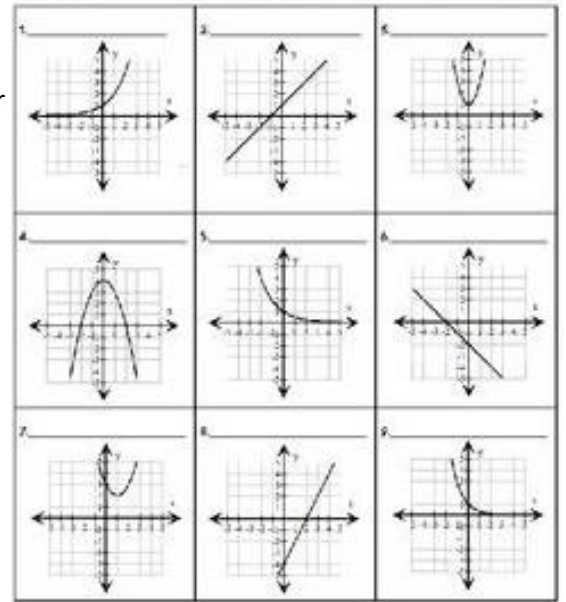
5) A bacteria in a lab doubles every 2 hours.

Linear Quadratic Exponential Other (circle one)

6) The area of a poster with length $(x-5)$ inches and width $(x+1)$ inches.

Linear Quadratic Exponential Other (circle one)

7) Decide whether each graph to the right is a linear, exponential, or quadratic function. Write L, E, or Q in each blank above the graph.



$y = x + 5$	$y = \frac{4x}{3}$	$y = 1 - x^2$
$y = 4.7$	$y = \pi x$	$y = \frac{4}{x}$
$2x + 3y = 7$	$y = 4(x - 1)$	$y = \frac{2}{5}x$
$10y = 4x$	$5xy = 2$	$y = 3x + x^2$

8) Decide whether each graph to the right is a linear, exponential, or quadratic function or other. Write L, E, Q, or O in each box.