Name: _____ Period: ____ Due Date: March 4, 2019

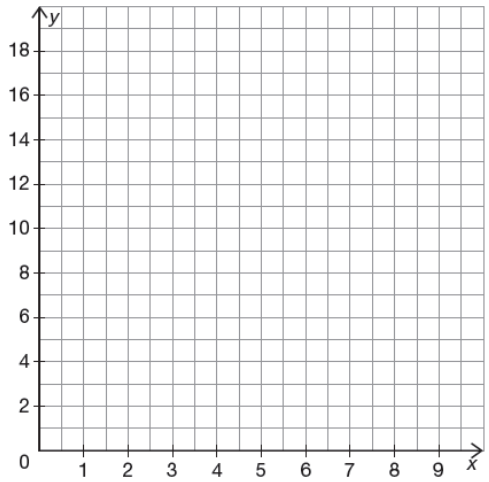
(MATH 5)

Exponentials Homework #7

1. Rochely and Emileydi are selling horchata to their neighbors. They both start selling the cups for $2. Rochely increases the cost by $0.50 every day, while Emileydi increases the cost by 50%.

Days Since They Started Selling Horchata	Rochely's Price	Emileydi's Price
0	$2	$2
1		
2		
3		
4		
5		
20		

R(x)=_____ E(x)=_____



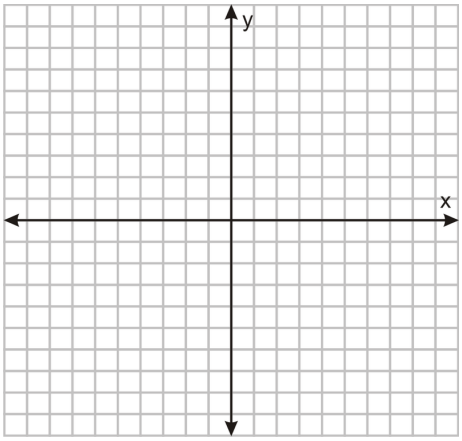
2. In Bolivia, the population was 10.5 million people in the year 2010 and it continuously increases by 1.6% annually.
   a. Write a function to model the population, N(t), with respect to time, t.

   b. Using your function, predict what Bolivia's population will be in 2030.

   c. Using your function, predict what Bolivia's population was in 2000.

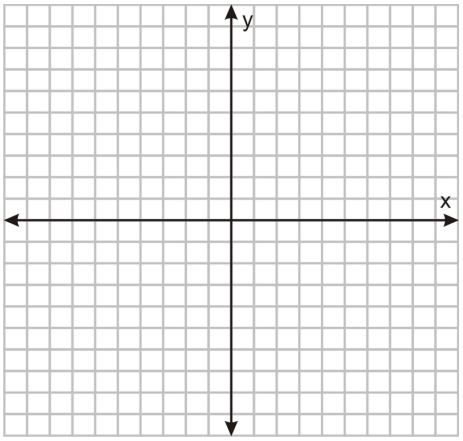
Directions: Graph the exponential functions and list the key characteristics.

1. $f(x)=4^x$



Domain	
Range	
Asymptote	
X-Intercept	
Y-Intercept	
End Behavior	
Interval of Increase/Decrease	

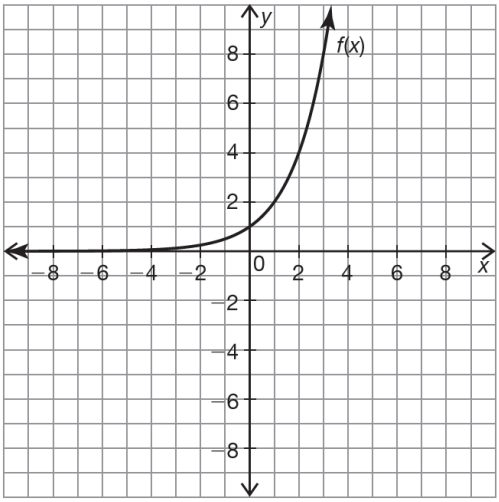
2. $g(x)=(\frac{1}{4})^x$



Domain	
Range	
Asymptote	
X-Intercept	
Y-Intercept	
End Behavior	
Interval of Increase/Decrease	

Directions: Graph the transformation and describe each of the transformations.

1. $g(x)= \frac{1}{2} f(-x)+1$



f(x) was _____

_____

_____

_____

_____

_____

_____ to obtain g(x).