Geometry Name_____

Module 7.3 and 7.5 period 1 2 3 5 6

Topic: Tables of value

Find the value of $f(x)$ for the given domain. Write x and $f(x)$ as an ordered pair.

1. $f(x) = 3x$

x	$f(x)$	$(x, f(x))$
-2		
-1		
0		
1		
2		

2. $f(x) = x^2$

x	$f(x)$	$(x, f(x))$
-2		
-1		
0		
1		
2		

3. $f(x) = 5^x$

x	$f(x)$	$(x, f(x))$
-2		
-1		
0		
1		
2		

Find the value of $g(x)$ for the given domain. Write x and $g(x)$ as an ordered pair.

4. $g(x) = 3x + 4$

x	$g(x)$	$(x, g(x))$
-2		
-1		
0		
1		
2		

5. $g(x) = x^2 - 3$

x	$g(x)$	$(x, g(x))$
-2		
-1		
0		
1		
2		

6. $g(x) = 5^x + 2$

x	$g(x)$	$(x, g(x))$
-2		
-1		
0		
1		
2		

Compare f(x) and g(x) from above #1 & 4, #2 & 5, #3 & 6. Describe how g(x) has been transformed from f(x). Write g(x) as a function of f(x).

7. $f(x) = 3x$
$g(x) = 3x + 4$

Description:

Equation for g(x) in terms of f(x)

8. $f(x) = x^2$
$g(x) = x^2 - 3$

Description:

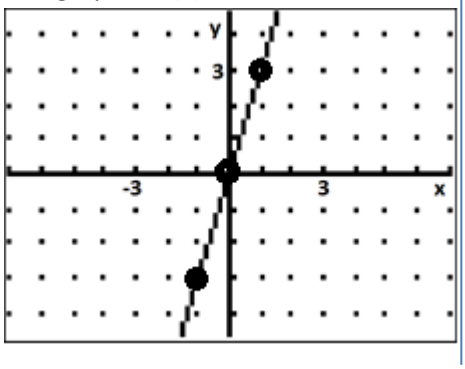
Equation for g(x) in terms of f(x)

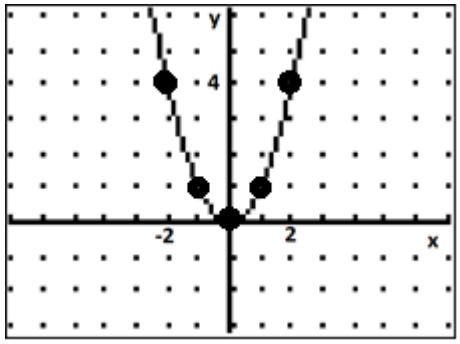
9. $f(x) = 5^x$
$g(x) = 5^x + 2$

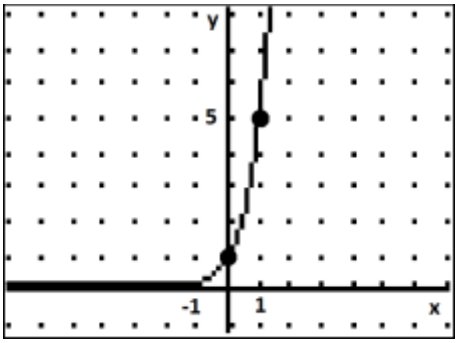
Description:

Equation for g(x) in terms of f(x)

The graph of f(x) for #1, 2, and 3 is shown below. Draw the graph of g(x) for #4, 5, and 6.

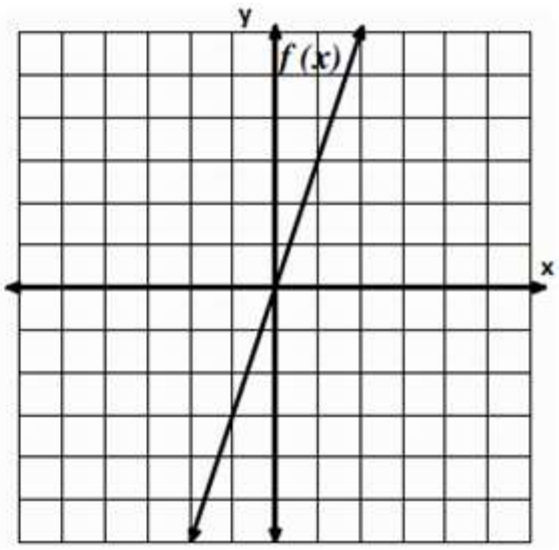






Topic: Vertical and horizontal translations

10. **Use the graph of $f(x) = 3x$ to answer the following questions.**



a. Sketch the graph of $g(x) = 3x - 2$ on the same grid.

b. Sketch the graph of $h(x) = 3(x - 2)$.

c. Describe how $f(x)$, $g(x)$, and $h(x)$ are different and how they are the same.

d. Explain in what way the parentheses affect the graph. Why do you think this is so?

11. SHOW geometric work in your drawings to locate the following:

a) Find the line of reflection that carries ABC onto image A'B'C'. Draw the line of reflection.
b) Find the center of rotation that carries A'B'C' onto image A"B"C". Label the center P and measure the angle of rotation.
c) Find the translation vector that maps A"B"C" onto image A"'B"'C"'. Draw the vector. Measure its length in cm.