

**Secondary Math III**  
**Function Notation/Building New Functions**  
**Assignment 1.1**

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

Period: \_\_\_\_\_

Given a function  $f$ , evaluate the function for the given value or expression:

1.  $f(x) = 3x - 7$ , find

a.  $f(4) =$

b.  $f(-3) =$

c.  $f(x + 1) =$

2.  $f(x) = 5 - x^2$ , find

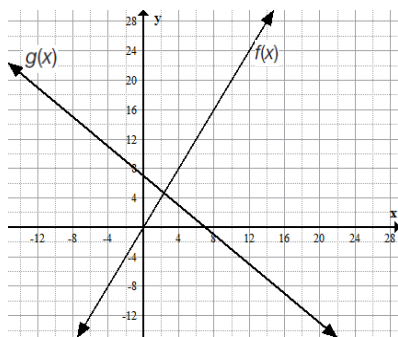
a.  $f(1) =$

b.  $f(-2) =$

c.  $f(x - 3) =$

Predict the function family of  $m(x)$  and sketch the graph of  $m(x)$  using key points.

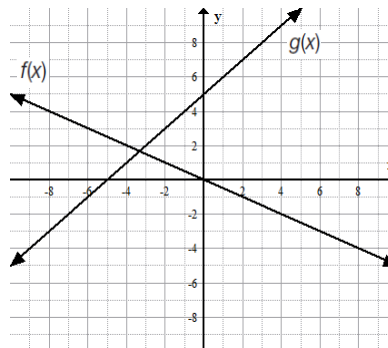
3.  $m(x) = f(x) + g(x)$ ;  
 $f(x) = 2x$ ;  $g(x) = -x + 7$



Function Family: \_\_\_\_\_

$x$	$f(x)$	$g(x)$	$m(x)$

4.  $m(x) = f(x) - g(x)$ ;  
 $f(x) = -\frac{1}{2}x$ ;  $g(x) = x + 5$



Function Family: \_\_\_\_\_

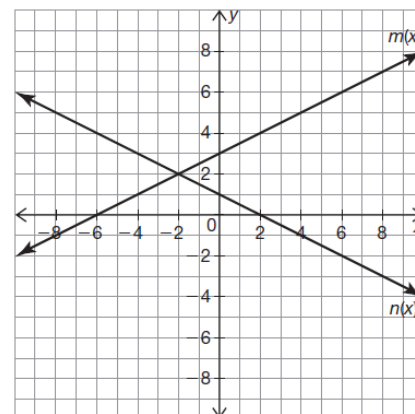
$x$	$f(x)$	$g(x)$	$m(x)$

5. Use the graph of  $m(x)$  and  $n(x)$  at the right.

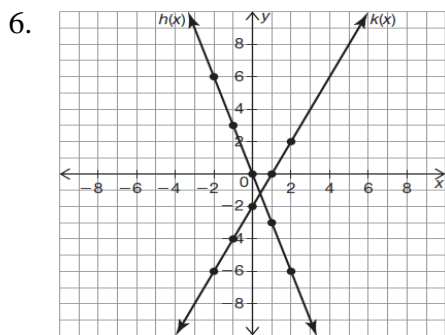
a. Predict the function family of  $t(x) = m(x) \cdot n(x)$  and explain your reasoning. \_\_\_\_\_

b. Complete the table of values.

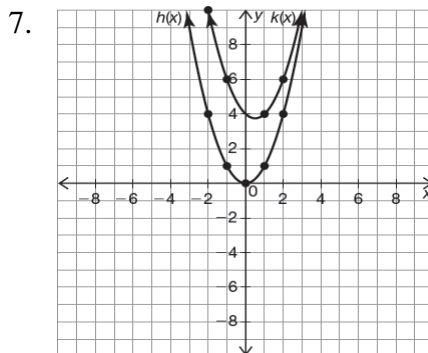
$x$	$m(x)$	$n(x)$	$t(x) = m(x) \cdot n(x)$
-6			
-4			
-2			
0			
2			



For problems 6-7, draw the function  $j(x)$  with outputs such that  $k(x) = h(x) + j(x)$ . Complete the table of values to verify that  $h(x) + j(x) = k(x)$ .



$x$	$h(x)$	$j(x)$	$k(x) = h(x) + j(x)$
-2			
-1			
0			
1			
2			



$x$	$h(x)$	$j(x)$	$k(x) = h(x) + j(x)$
-2			
-1			
0			
1			
2			

For problems 8-12, calculate each value using the graphs of  $f(x)$  and  $g(x)$

8.  $g(-1)$

9.  $f(0)$

10.  $(f + g)(-2)$

11.  $(f - g)(1)$

12.  $(fg)(-1)$

