

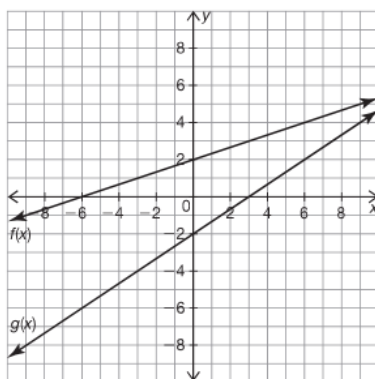
LESSON 1.5 Assignment

1

Name _____ Date _____

**I've Created a Monster, $m(x)$
Analyzing Graphs to Build New Functions**

1. Analyze the graphs of the functions $f(x)$ and $g(x)$.



a. Predict the function family of $h(x) = f(x) + g(x)$. Explain your reasoning.

b. Plot 3 points that will lie on the graph of $h(x)$.

c. Determine the equations of the functions $f(x)$ and $g(x)$.

© Carnegie Learning

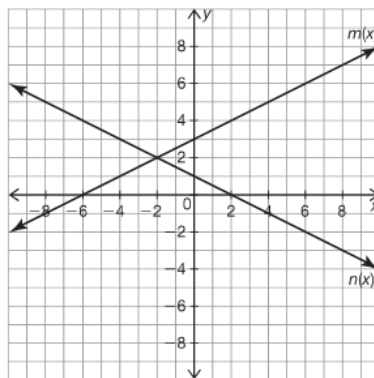
1

LESSON 1.5 Assignment

page 2

- d. Determine the equation of the function $h(x) = f(x) + g(x)$. Then, graph $h(x)$.
- e. Does $h(x)$ belong to the function family you predicted? Does the graph of $h(x)$ pass through the 3 points you plotted?

2. Analyze the graphs of the functions $m(x)$ and $n(x)$.



- a. Predict the function family of $t(x) = m(x) \cdot n(x)$. Explain your reasoning.
- b. Plot 3 points that will lie on the graph of $t(x)$.

LESSON 1.5 Assignment

page 3

1

Name _____ Date _____

- c. Complete the table of values.

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

- d. Do the values in the table verify your prediction about the function family of $t(x)$? Explain your reasoning.

- e. Determine the equations of the functions $m(x)$ and $n(x)$.

- f. Determine the equation of the function $t(x) = m(x) \cdot n(x)$. Then, graph $t(x)$.

- g. Does $t(x)$ belong to the function family you predicted? Does the graph of $t(x)$ pass through the 3 points you plotted?