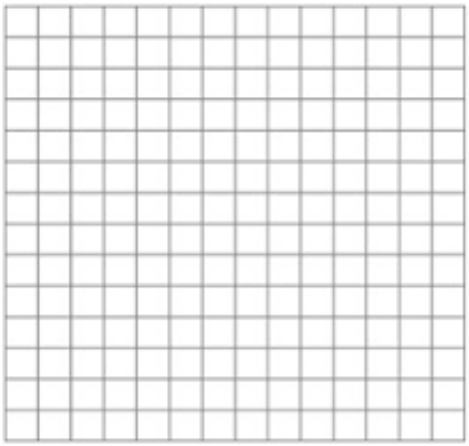
MM Algebra 1 Name: _____
Mr. Villegas Date: _____

Out Numbered

Aim/Essential Question: **How do we read graphs?**

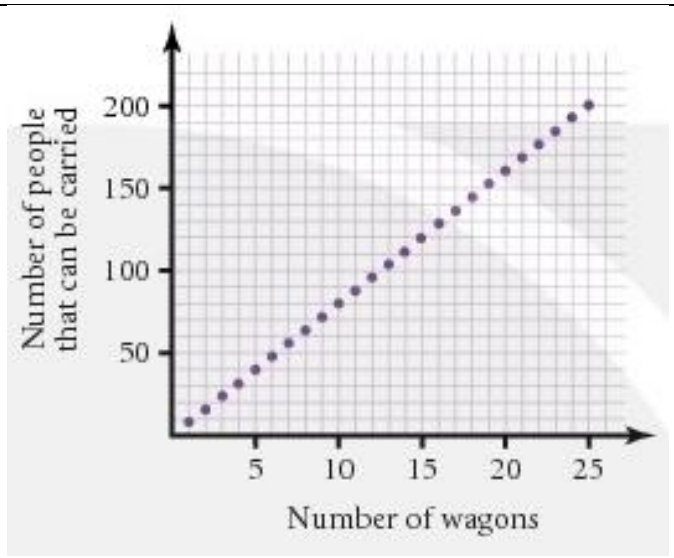
Do Now: Draw a vertical and horizontal number lines**.** Label the graph at the right with where the x-values and y-values are positive and negative. Plot the following points: (3, 4) (-2, 5) (1, -5) (0, 4) (-4, 0)	

Vocabulary/Concept Bank

Important term	Definition

The scaled graphs in this activity are similar to examples you have seen before. Base your answers to the questions *on the scales shown in these graphs.*

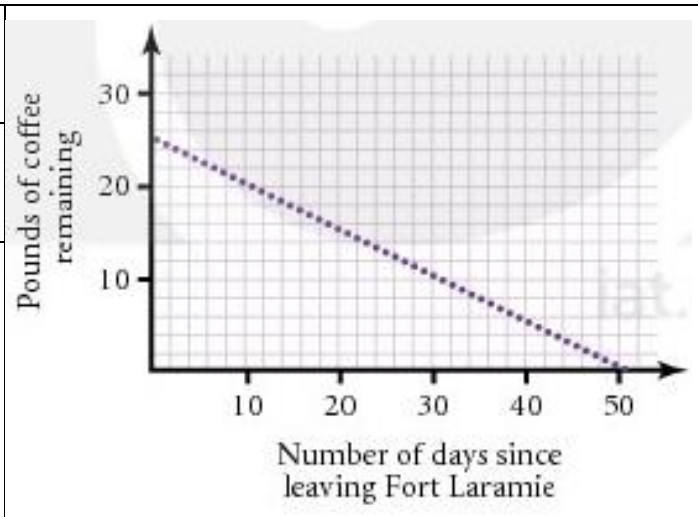
1. This graph shows the number of people that can be carried in a given number of wagons.

a. How many people can 5 wagons carry?		
b. How many people can 10 wagons carry?		
c. How many people can 15 wagons carry?		

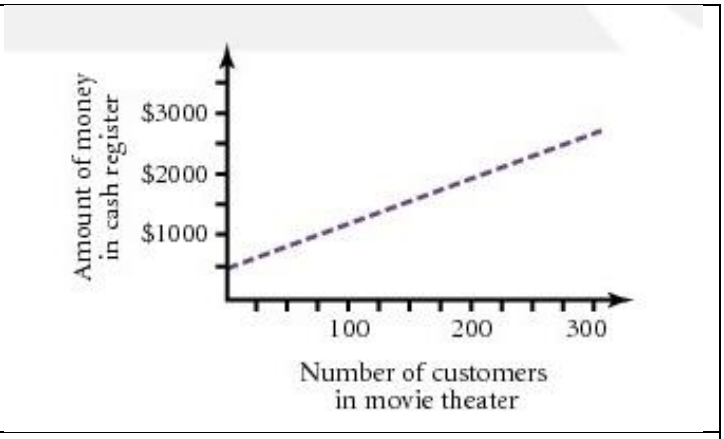
d. Make an In-Out table with the information from Questions 1a through 1c. In = number of wagons; Out = number of people that can be carried.	
e. Find a rule for the number of people that *x* wagons can carry. Use the graph to generate additional rows for the In-Out table if you need more information.	
f. How many people can each wagon carry? Describe, in writing, how this number connects to the rule you found in part e.	

How does the fact that ____ more people can be carried by each additional wagon affect your table?	
Could this number tell you how many people could be carried by 100 wagons?	

2. The next graph shows the amount of coffee left in terms of the number of days since leaving Fort Laramie.

a. How much coffee was left 10 days after leaving Fort Laramie?		
b. How much coffee was left 20 days after leaving Fort Laramie?		
c. How much coffee was left 30 days after leaving Fort Laramie?		
d. Make an In-Out table with the information from Questions 2a through 2c. In = number of days since leaving Fort Laramie; Out = pounds of coffee left.		
e. Find a rule for the amount of coffee left *x* days after leaving Fort Laramie. Use the graph to generate additional rows for the In-Out table if you need more information.		
f. How much coffee was there when the group left Fort Laramie? How much did they use each day? Describe, in writing, how these amounts connect to the rule you found in part e.		

3. The next graph shows the amount of money in a movie theater cash register as a function of the number of customers in the theater.

a) How much money would be in the cash register if there were 25 customers?		
b) How much money would be in the cash register if there were 75 customers?		
c) How much money would be in the cash register if there were 250 customers?		
d) Make an In-Out table with the information from Questions 3a through 3c. In = number of customers; Out = amount of money in cash register.		
e) Find a rule for the amount of money in the cash register if there were *x* customers. Add rows to the In-Out table if you need more information.		
f) How much money would be in the cash register if there were no customers? How much would the amount of money change for every additional customer? Describe, in writing, how these amounts connect to the rule you found in part e.		

What Quadrant(s) do these graphs use? Why?	
Describe a graph that might use only Quadrant IV.	