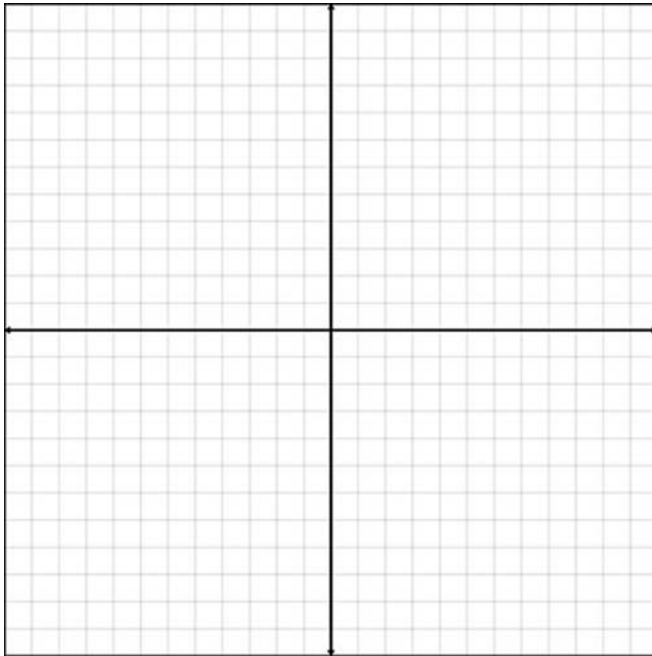


Do you remember?



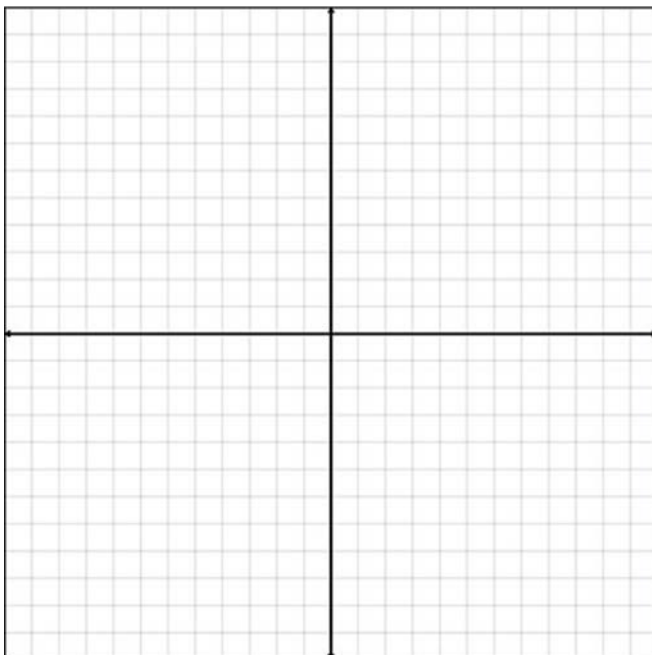
Label:

- The x-axis
- The y-axis
- The origin
- The quadrants

Plot:

- $(4, 6)$
- $(-5, 0)$
- $(0, 8)$
- $(10, -7)$

Do you remember?



Label:

- The x-axis
- The y-axis
- The origin
- The quadrants

Plot:

- $(4, 6)$
- $(-5, 0)$
- $(0, 8)$
- $(10, -7)$

# $y = mx$

Name \_\_\_\_\_

Partner \_\_\_\_\_

Date \_\_\_\_\_ Class pd \_\_\_\_\_

Graph each of the equations in the tables below. Use the coordinate grids to the right of the tables. **USE THE SAME COLOR** as the app does to sketch each line. Write the color in the table.

TABLE 1

$y = mx$	COLOR
$y_1 = x$	
$y_2 = 2x$	
$y_3 = 4x$	
$y_4 = -x$	
$y_5 = -2x$	
$y_6 = -4x$	

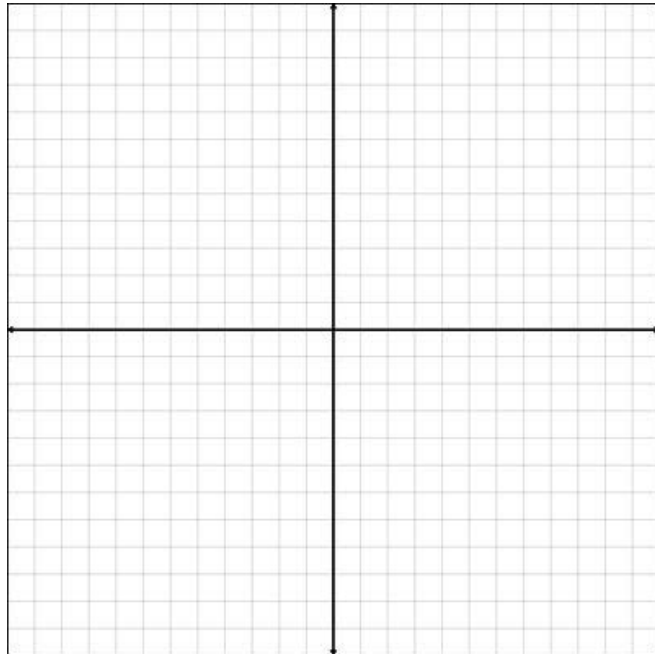
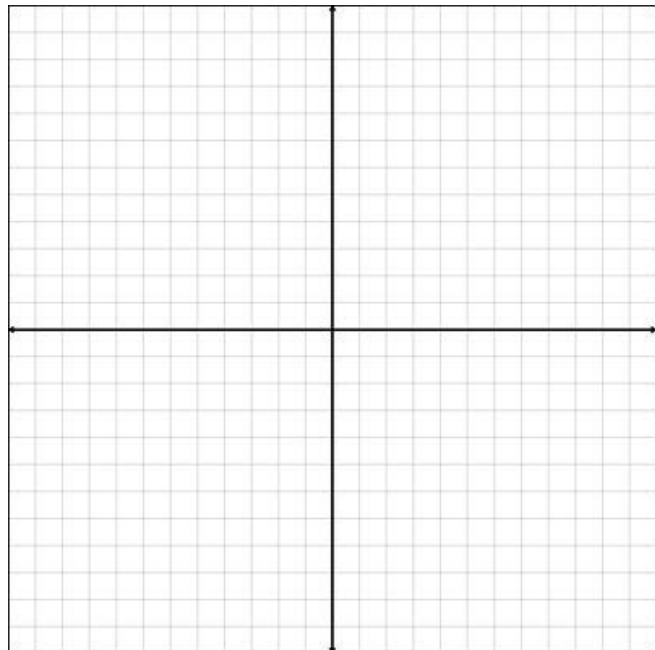


TABLE 2

$y = mx$	COLOR
$y_1 = x$	
$y_7 = \frac{1}{2}x$	
$y_8 = \frac{1}{4}x$	
$y_9 = -\frac{1}{2}x$	
$y_{10} = -\frac{1}{4}x$	



### Think & Write About It!

Part 1: Study the graphs you created using **Table 1**.

1. Describe what you observe about the direction and steepness when you compare:

$y_1 = x$ AND $y_2 = 2x$	$y_1 = x$ AND $y_3 = 4x$
$y_1 = x$ AND $y_4 = -x$	$y_2 = 2x$ AND $y_5 = -2x$
$y_3 = 4x$ AND $y_6 = -4x$	

2. The placement of a line is where it crosses the y-axis. Describe the placement of the lines you graphed.

Part 2: Study the graphs you created using **Table 2**.

1. Describe what you observe about the direction and steepness when you compare:

$y_7 = \frac{1}{2}x$ AND $y_9 = -\frac{1}{2}x$	$y_8 = \frac{1}{4}x$ AND $y_{10} = -\frac{1}{4}x$
--	---

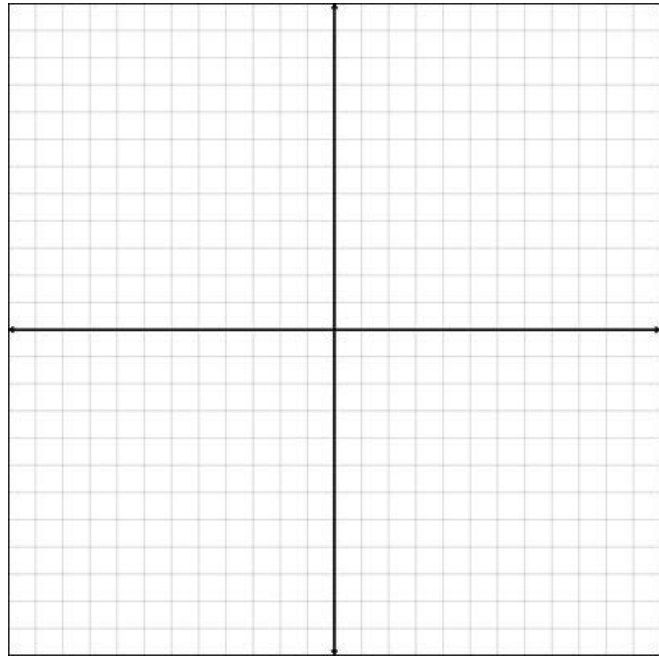
2. The placement of a line is where it crosses the y-axis. Describe the placement of the lines you graphed.

Part 3

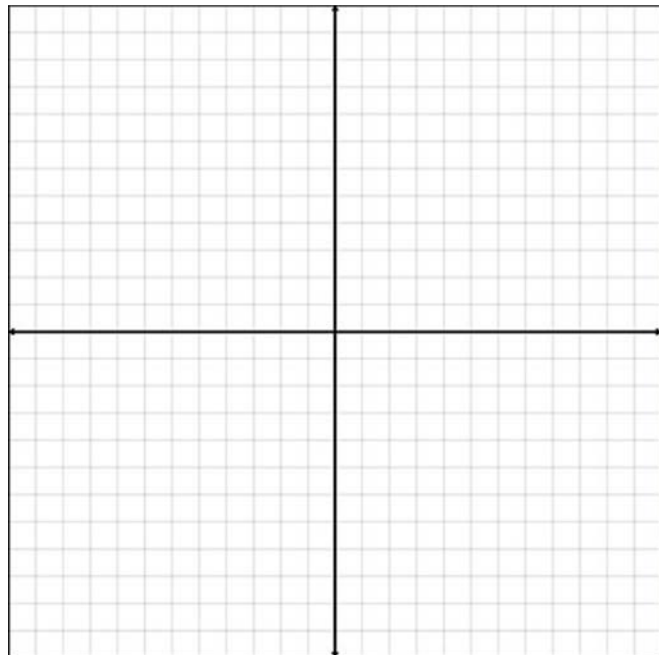
What general statements can you make about the graphs from Table 1 and Table 2?

Extra grids and tables.

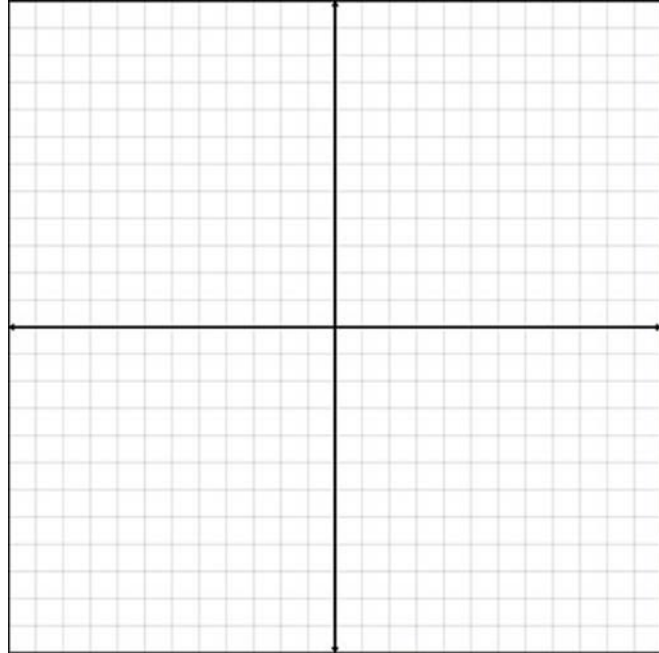
$y = mx$	COLOR
$y_1 =$	
$y_2 =$	
$y_3 =$	
$y_4 =$	
$y_5 =$	
$y_6 =$	



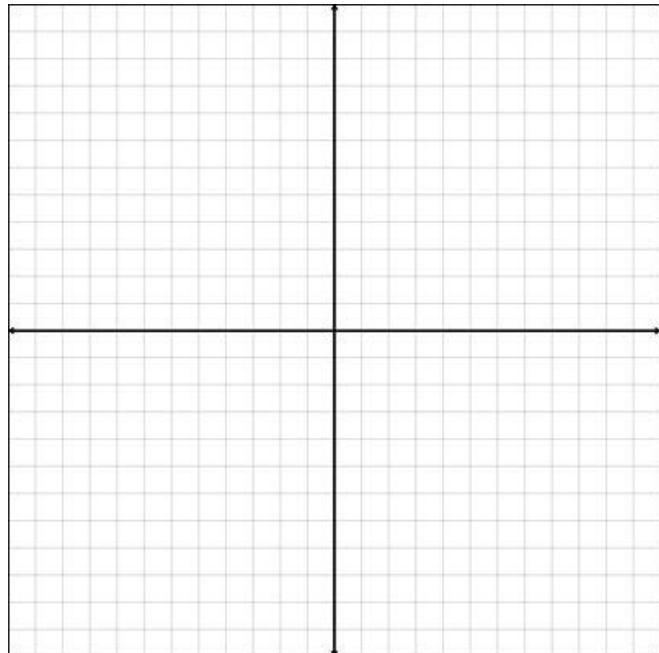
$y = mx$	COLOR
$y_1 =$	
$y_2 =$	
$y_3 =$	
$y_4 =$	
$y_5 =$	
$y_6 =$	



$y = mx$	COLOR
$y_1 =$	
$y_2 =$	
$y_3 =$	
$y_4 =$	
$y_5 =$	
$y_6 =$	



$y = mx$	COLOR
$y_1 =$	
$y_2 =$	
$y_3 =$	
$y_4 =$	
$y_5 =$	
$y_6 =$	



# Plug It In!

$$y = mx$$

Name \_\_\_\_\_

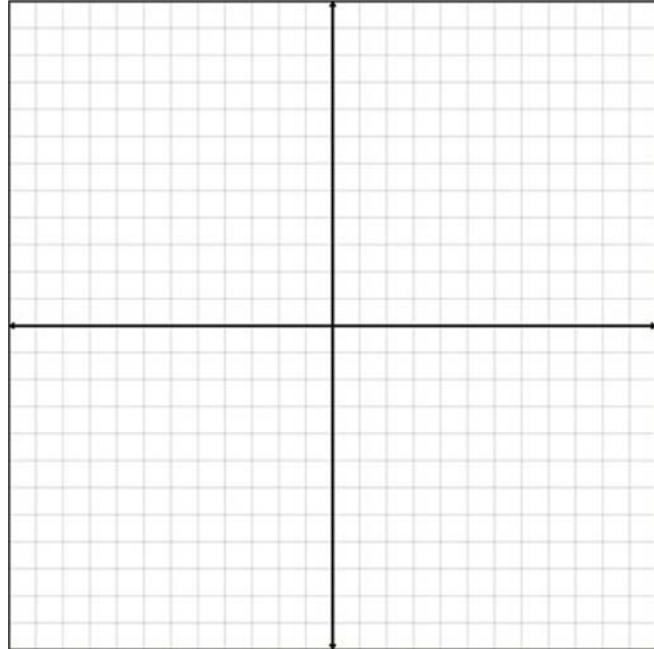
Partner \_\_\_\_\_

Date \_\_\_\_\_ Class pd \_\_\_\_\_

Complete the t-tables below. Then use the coordinate grids to graph the resulting lines.  
**Compare each line to the graph of the same line on [desmos.com](https://www.desmos.com).**

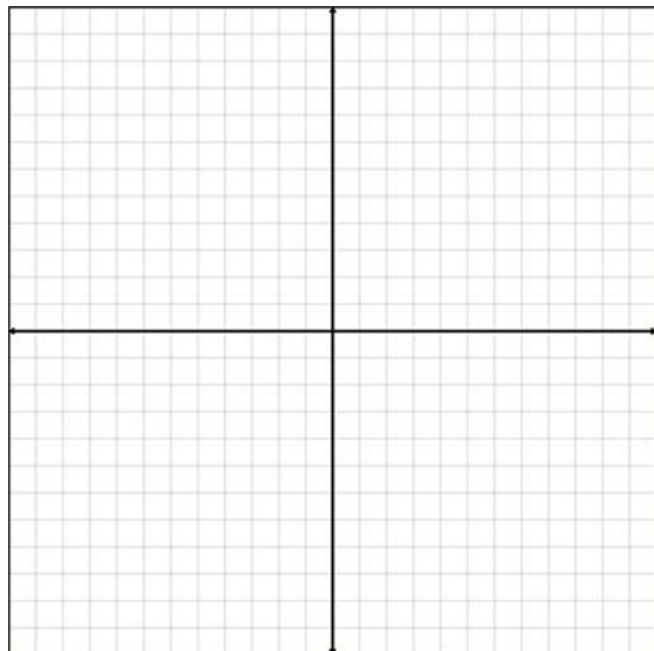
$$y = x$$

$x$	$y$
-2	
-1	
0	
1	
2	



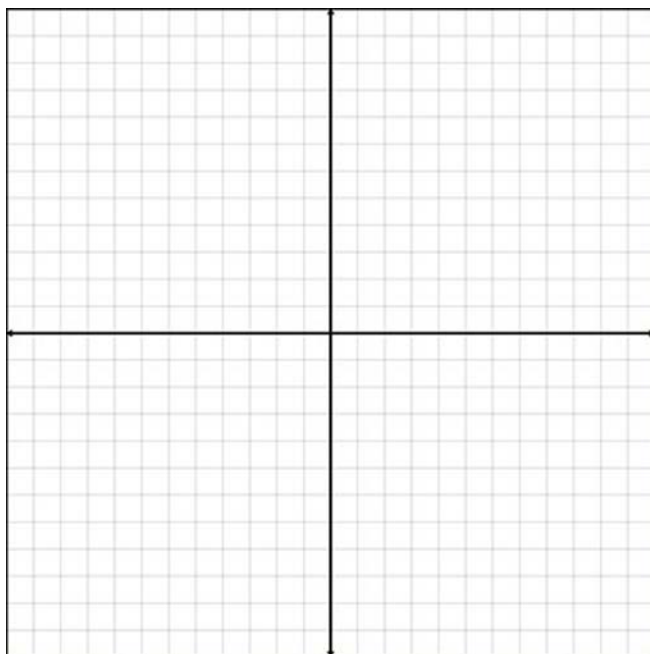
$$y = 2x$$

$x$	$y$
-2	
-1	
0	
1	
2	



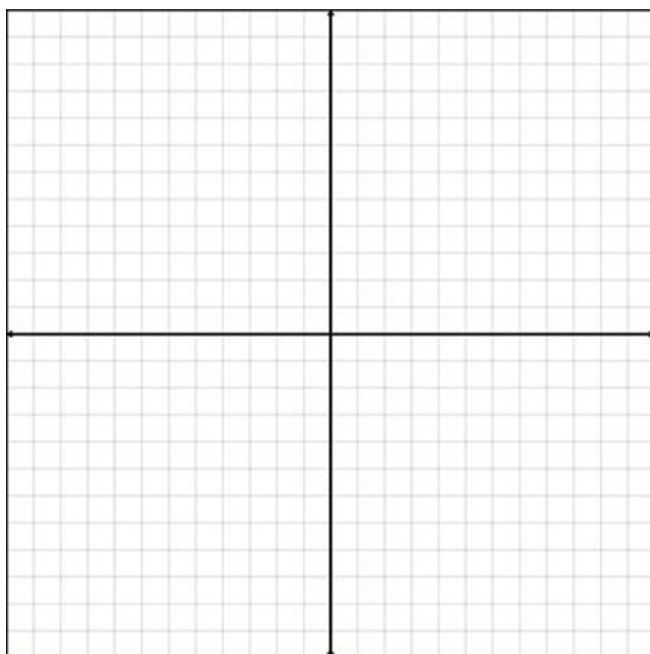
$$= 4x$$

$x$	$y$
-2	
-1	
0	
1	
2	



$$y = \frac{1}{2}x$$

$x$	$y$
-4	
-2	
0	
2	
4	





$$y = \frac{1}{4}x$$

$x$	$y$
-8	
-4	
0	
4	
8	

