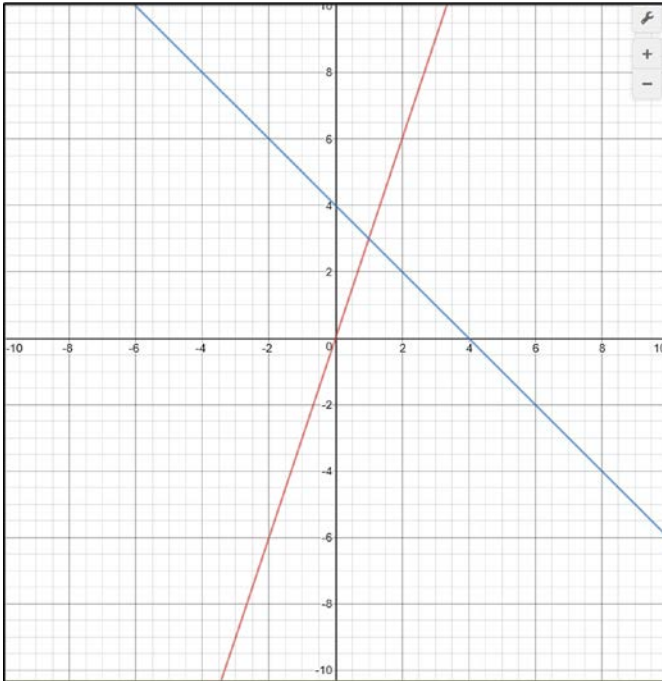
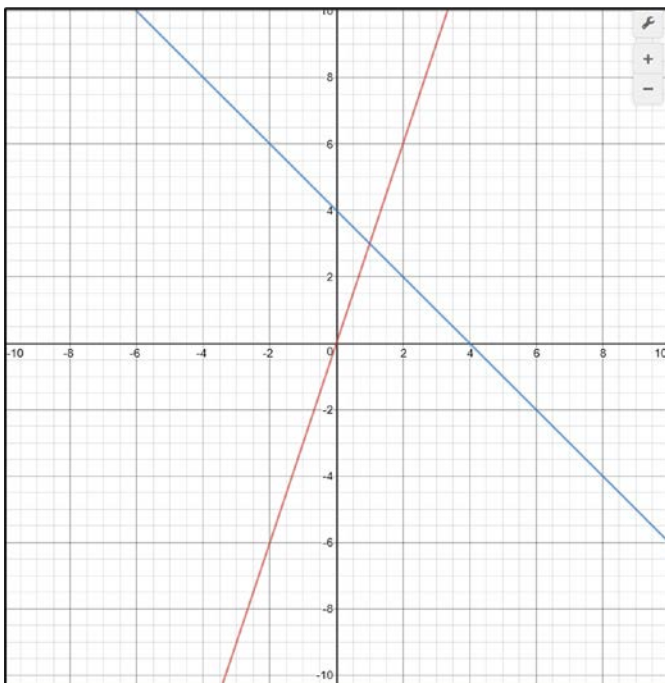


Think About It



1. Where does the line $y = 3x$
 - a. Cross the x-axis?
 - b. Cross the y-axis?
2. Where does the line $y = -x + 4$
 - a. Cross the x-axis?
 - b. Cross the y-axis?
3. Write *at least* one detail that you know is true about each line.
HINT: Remember what you learned about $y=mx$.

Think About It



1. Where does the line $y = 3x$
 - a. Cross the x-axis?
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 - b. Cross the y-axis?
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HINT: Remember what you learned about $y=mx$.

$y = mx + b$

Name _____

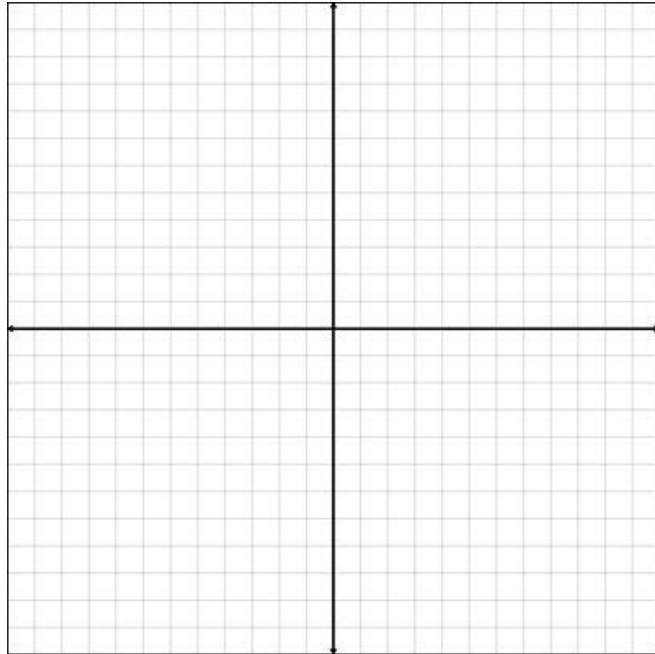
Partner _____

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

$y = mx + b$	COLOR
$y_1 = x + \frac{3}{2}$	
$y_2 = 2x + 2$	
$y_3 = 4x + 3$	
$y_4 = \frac{1}{2}x + 3$	
$y_5 = \frac{2}{3}x + 4$	



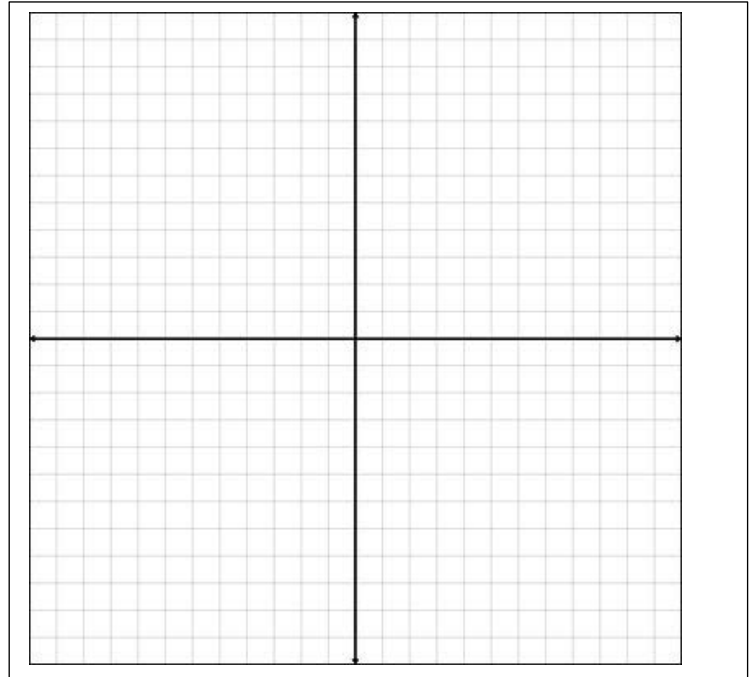
SO...Describe what happened. Consider *slope and placement* in your description.

What about a negative value for b ? Graph and find out.

$$y = 4x - 2$$

$$y = 2x - 1$$

Describe what happened. Consider both *slope* and *placement* in your description.

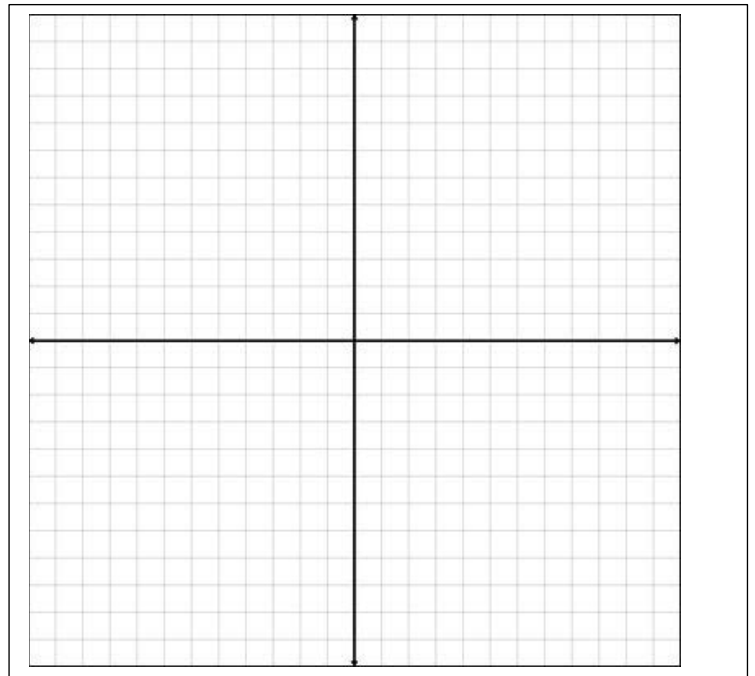


What about negative values for both m and b ? Graph and find out.

$$y = -x - \frac{3}{2}$$

$$y = -2x - 1$$

Describe what happened. Consider both *slope* and *placement* in your description.



Think & Write About It!

Use your graphs to help you complete your descriptions.

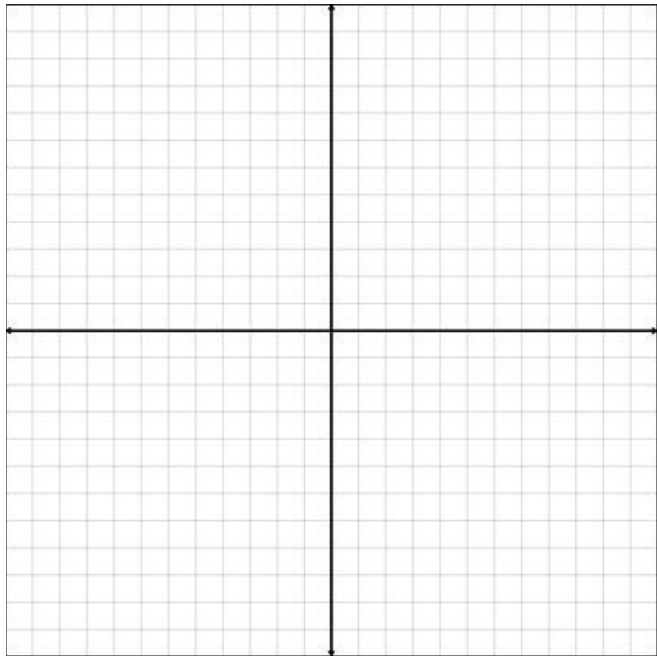
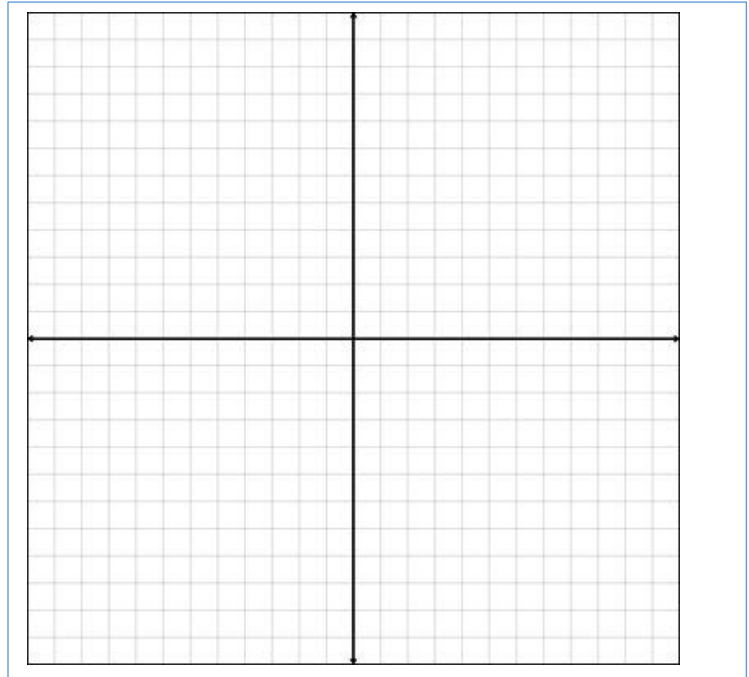
1. Consider the equation $y = mx + b$.

Describe:

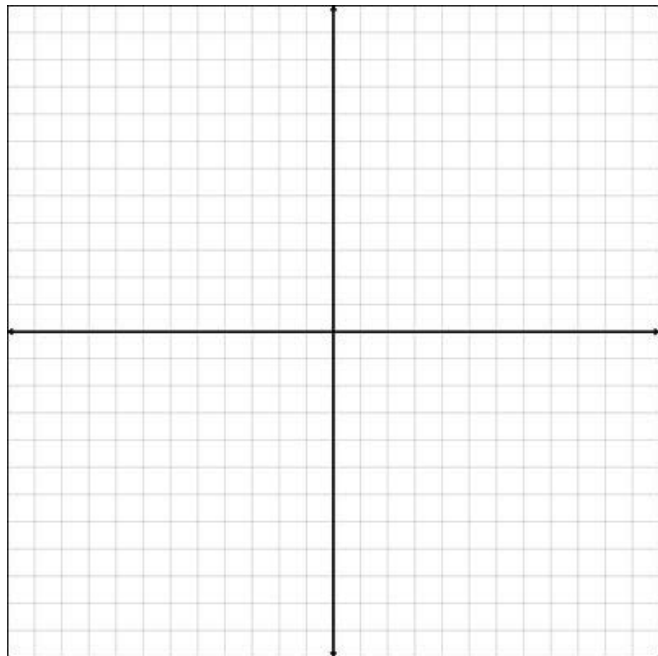
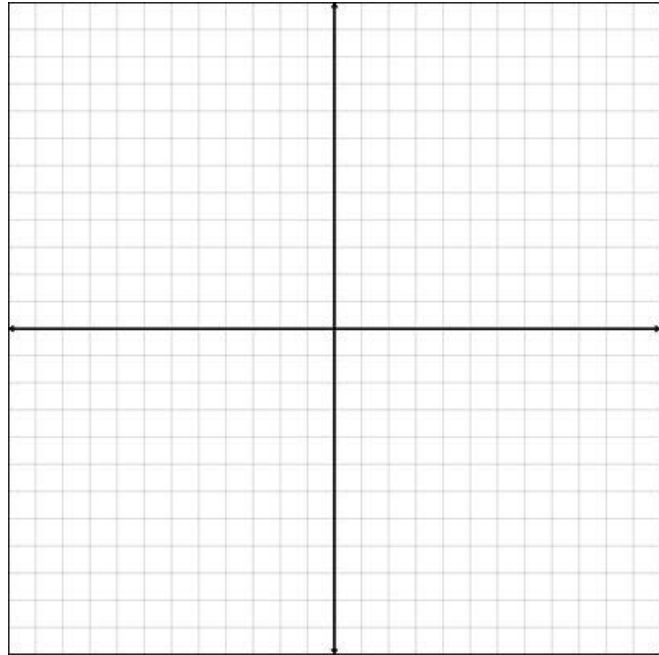
a. the effect of a positive m	b. the effect of a negative m
c. the effect of a positive b	d. the effect of a negative b
e. the effect of not having a b at all	

2. Describe how you can tell how steep a line will be.

Extra grids



S3 Revised: Slope & Distance: Time Graphs YMXB Handout



Plug It In!

$$y = mx + b$$

Name _____

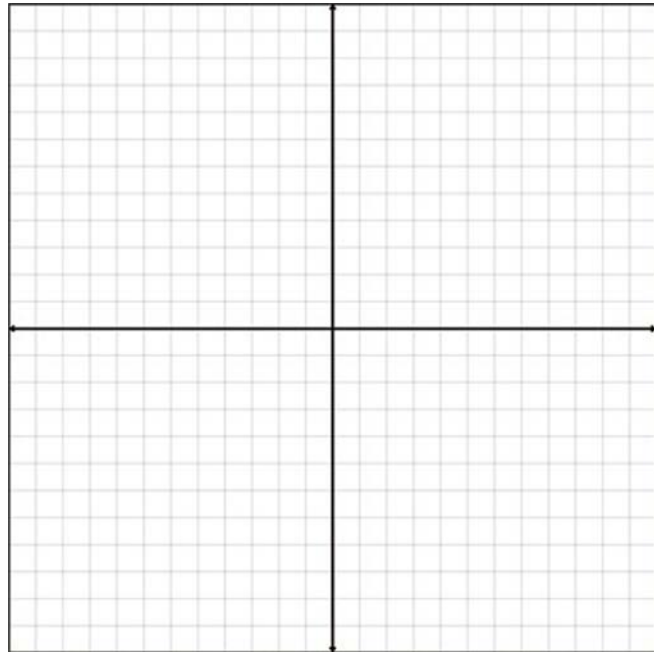
Partner _____

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).

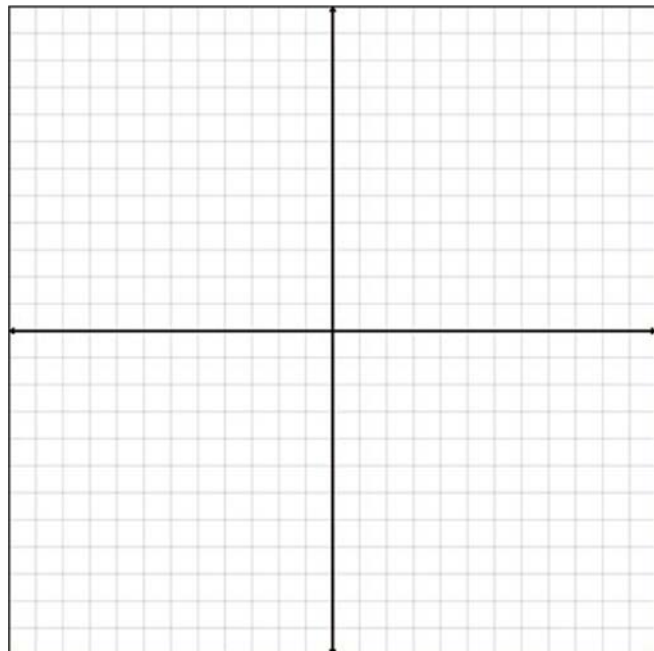
$$y = 2x + 2$$

x	y
-2	
-1	
0	
1	
2	



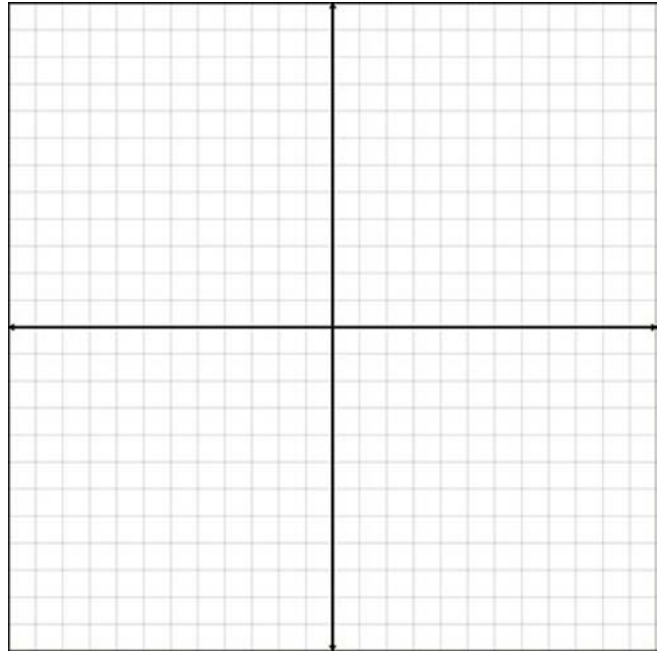
$$y = 2x$$

x	y
-2	
-1	
0	
1	
2	



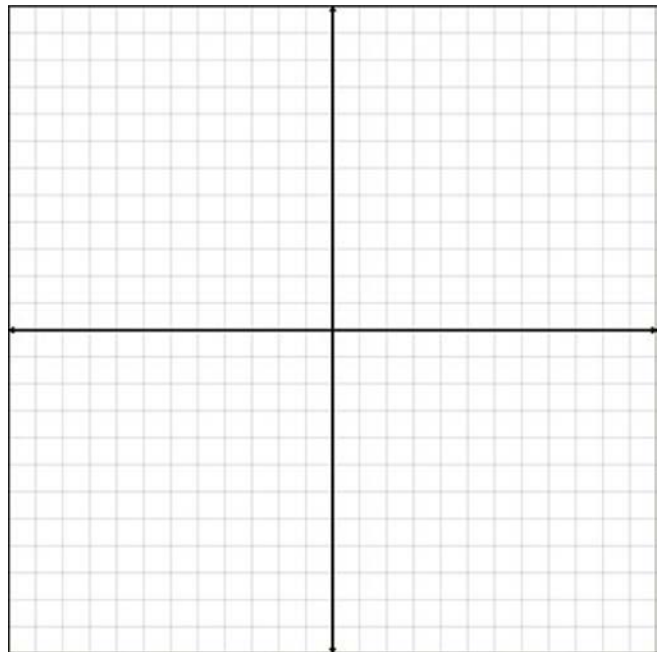
$$y = 4x$$

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	

