Slope-Intercept Worksheet REDO Name: KEY

Section 1: Graphing from Slope-Intercept Form

Graph each equation. Draw 2 graphs on each coordinate plane.

1a) $y = -4x + 2$

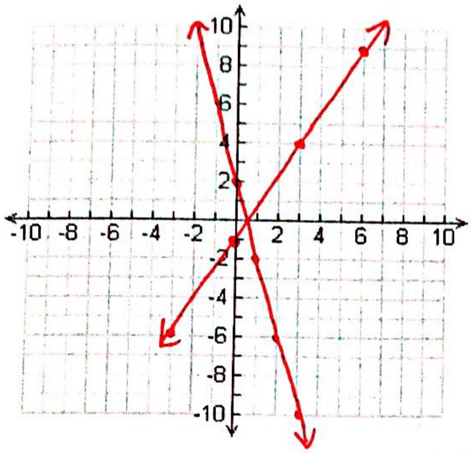
1b) $y = \frac{5}{3}x - 1$

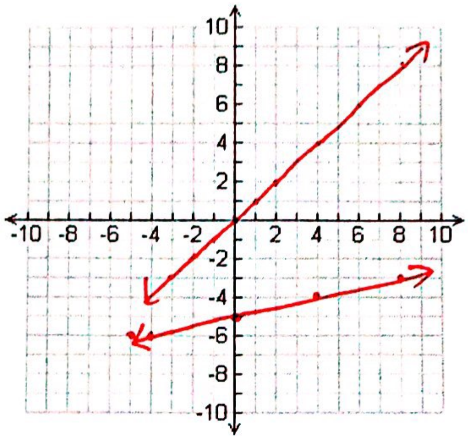
2a) $y = \frac{1}{4}x - 5$

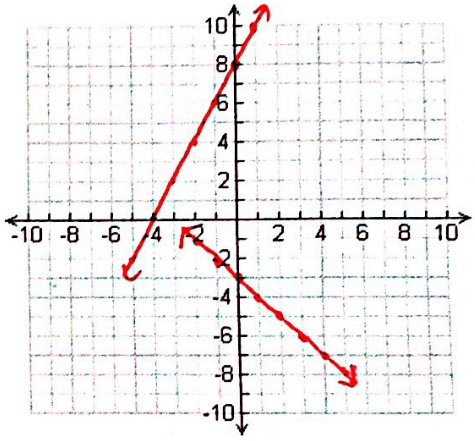
2b) $y = 1x + 0$

3a) $y = 2x + 8$

3b) $y = -1x - 3$





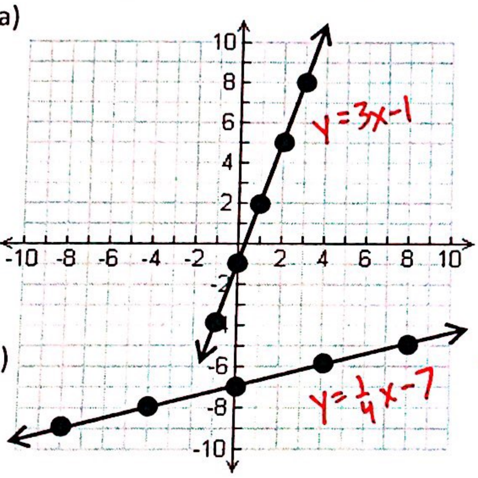


Section 2: Writing Equations in Slope-Intercept Form

Write an equation in the form y = mx + b.

4a)

4b)

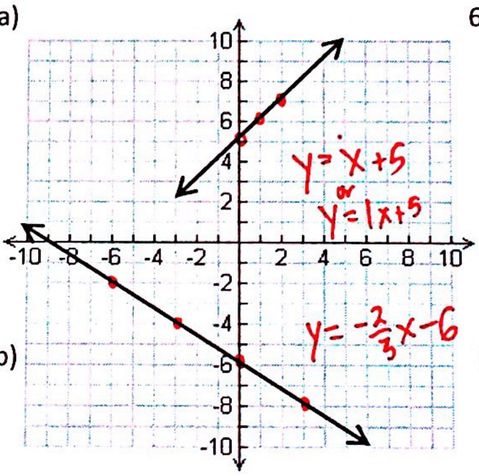


$y = 3x - 1$

$y = \frac{1}{4}x - 7$

5a)

5b)

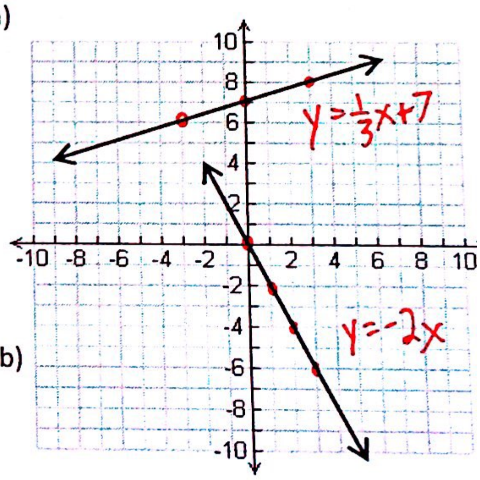


$y = x + 5$ or $y = 1x + 5$

$y = -\frac{2}{3}x - 6$

6a)

6b)



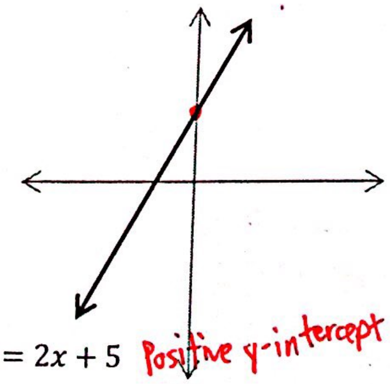
$y = \frac{1}{3}x + 7$

$y = -2x$

Section 3: Slope-Intercept Form without Exact Graphs

For 5-7, choose the equation that could represent the graph. EXPLAIN YOUR REASONING FOR EACH ONE.

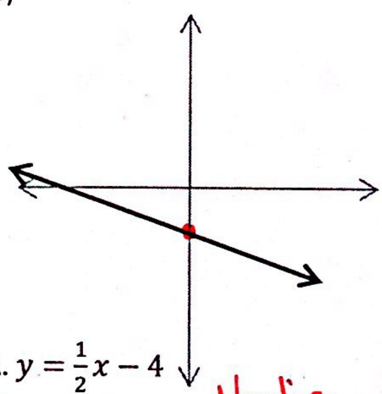
5)



A. $y = 2x + 5$ Positive y-intercept

B. $y = 2x - 5$

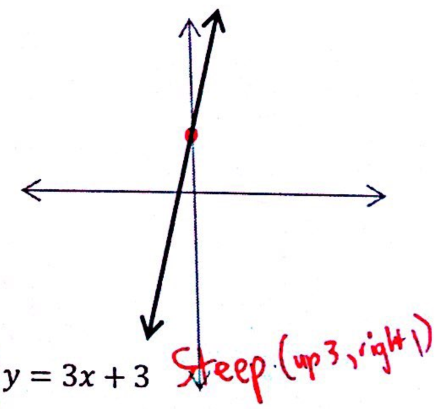
6)



A. $y = \frac{1}{2}x - 4$

B. $y = -\frac{1}{2}x - 4$ Negative slope

7)



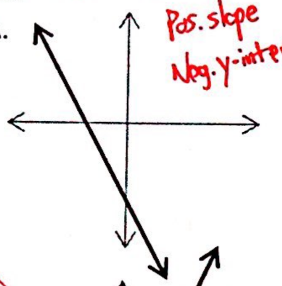
A. $y = 3x + 3$ Steep (up 3, right 1)

B. $y = \frac{1}{3}x + 3$

For 8-10, choose the graph that could represent the equation. EXPLAIN YOUR REASONING FOR EACH ONE.

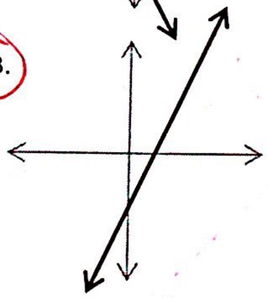
8) $y = 2x - 2.5$

A.

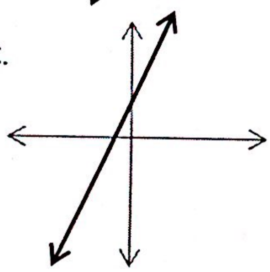


Pos. slope
Neg. y-intercept

B.

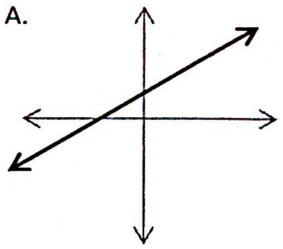


C.

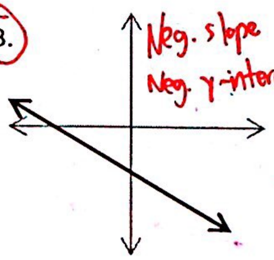


9) $y = -\frac{3}{5}x - 3$

A.

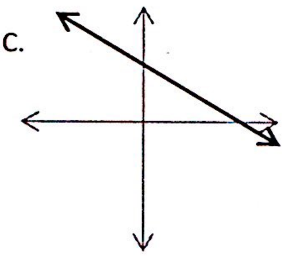


B.



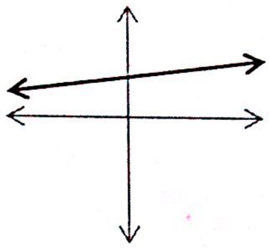
Neg. slope
Neg. y-intercept

C.

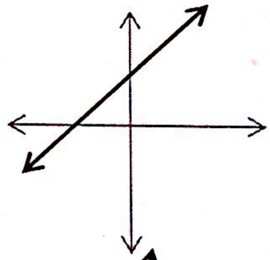


10) $y = 5x + 4$

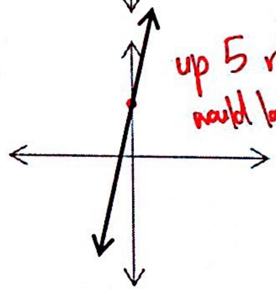
A.



B.



C.



up 5 right 1
would look like this

For 11-14, match the graphs with the equations. EXPLAIN YOUR REASONING!

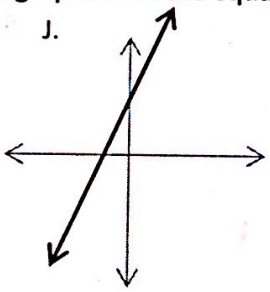
11) $y = 3x + 6$ J

12) $y = \frac{1}{3}x + 6$ M

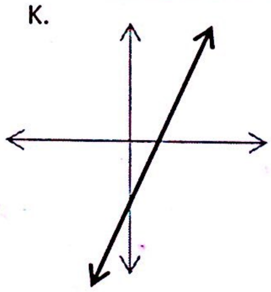
13) $y = 3x - 6$ K

14) $y = \frac{1}{3}x - 6$ L

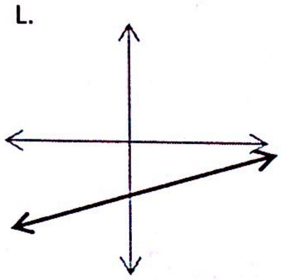
J.



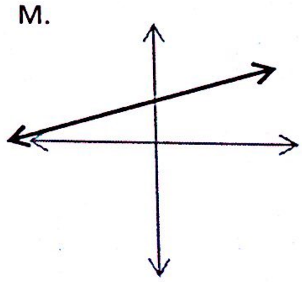
K.



L.



M.



Section 4: Slope-Intercept Story Problems

15) The height of a tree **y** can be modeled by **y = 5 + 4x**, where x is the number of years after it was planted.

a. Make a table representing the height from year 0 to year 5 .

b. What is the y-intercept of the equation? What does this represent in the situation?

c. What is the slope of the equation? What does this represent in the situation?

X	Y
0	5
1	9
2	13
3	17
4	21
5	25

5; original height

4; growth per year

16) You are buying chairs online. Each chair costs the same amount, and you also have to pay for shipping. The total cost, **y**, can be modeled by the equation y = 25x + 8, where **x** is the number of chairs.

a. Make a table representing the total cost of buying 1, 2, 3, 4, and 5 chairs.

b. What is the slope of the equation? What does this represent in the situation? 25; cost per chair

c. Would the equation make sense if you bought 0 chairs? Why or why not?

No; 0 chairs would not cost $8

X	Y
1	33
2	58
3	83
4	108
5	133