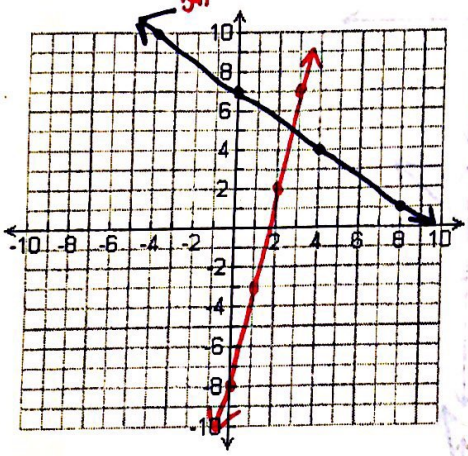
Section 1: Graphing from Slope-Intercept Form

Name: KEY

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

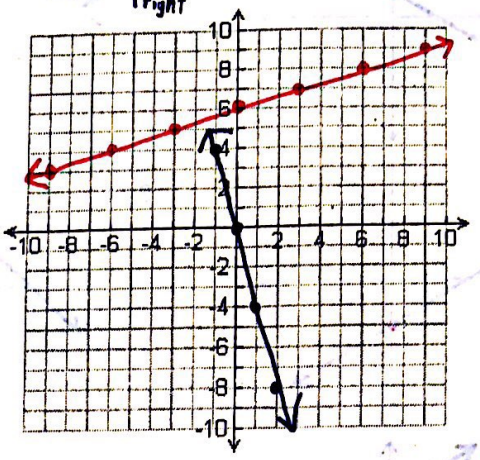
1a) $y = 5x - 8$ (up 5, right 1)

1b) $y = -\frac{3}{4}x + 7$ (down 3, right 4)



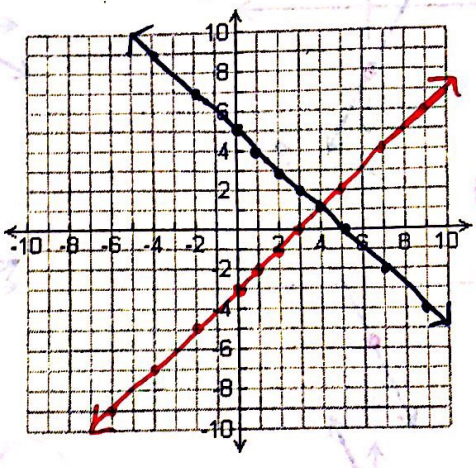
2a) $y = \frac{1}{3}x + 6$ (up 1, right 3)

2b) $y = -4x + 0$ (down 4, right 1)



3a) $y = \frac{1}{1}x - 3$ (up 1, right 1)

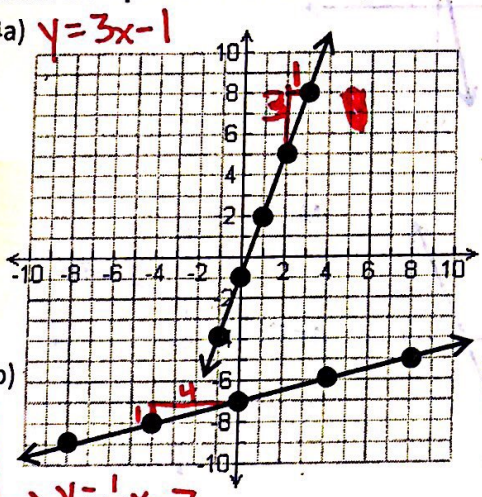
3b) $y = -\frac{1}{1}x + 5$ (down 1, right 1)



Section 2: Writing Equations in Slope-Intercept Form

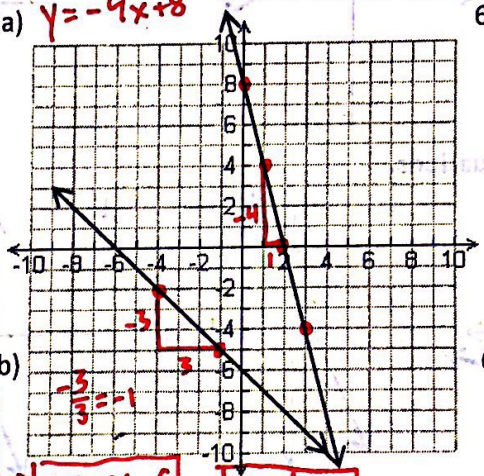
Write an equation in the form y = mx + b.

4a) $y = 3x - 1$



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

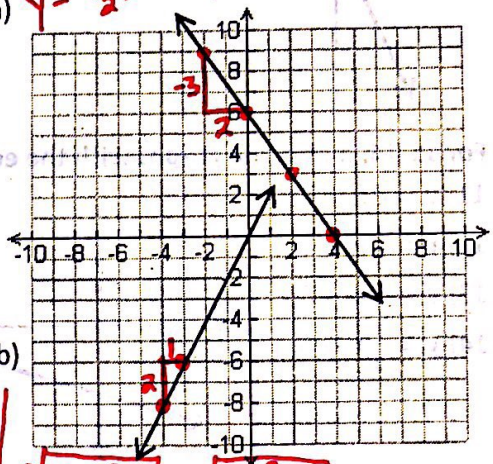
5a) $y = -4x + 8$



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

$y = -x - 6$ or $y = -1x - 6$

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

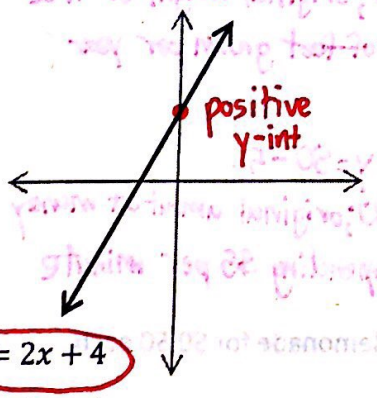


6b) $y = 2x$ or $y = \frac{2}{1}x$

Section 3: Slope-Intercept Form without Exact Graphs

For 5-7, choose the equation that could represent the graph.

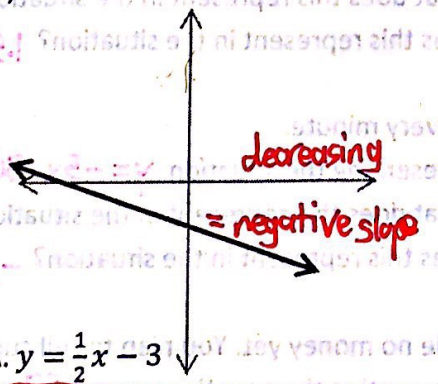
5)



A. $y = 2x + 4$

B. $y = 2x - 4$

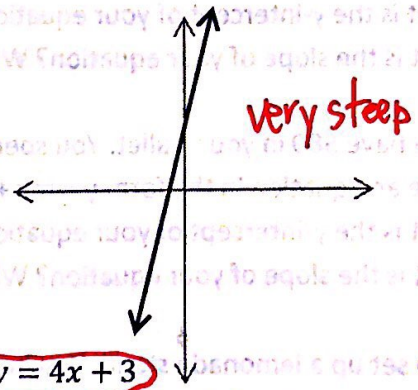
6)



A. $y = \frac{1}{2}x - 3$

B. $y = -\frac{1}{2}x - 3$

7)



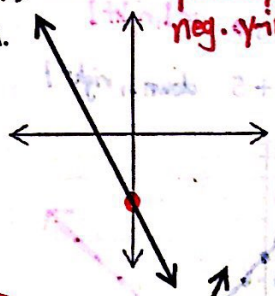
A. $y = 4x + 3$

B. $y = \frac{1}{4}x + 3$

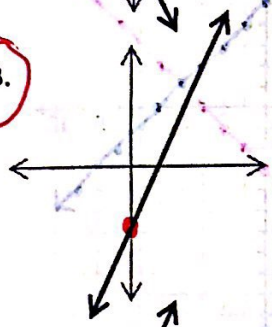
For 8-10, choose the graph that could represent the equation.

8) $y = 3x - 5$ pos. slope neg. y-int

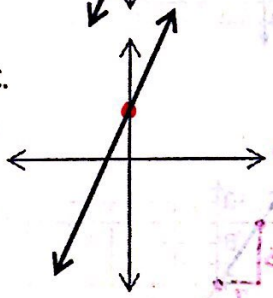
A.



B.

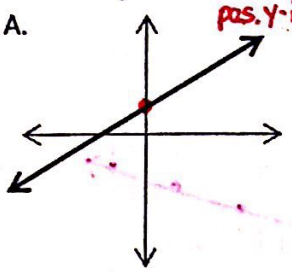


C.

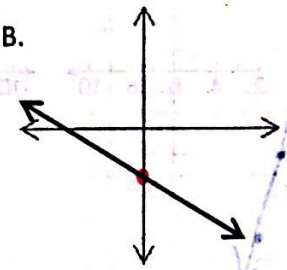


9) $y = -\frac{2}{3}x + 3$ neg. slope pos. y-int

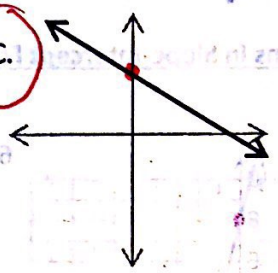
A.



B.

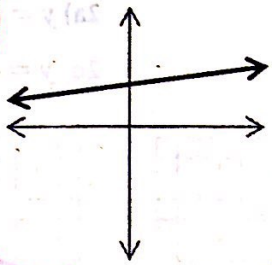


C.

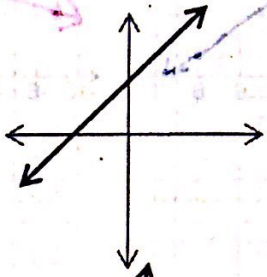


10) $y = \frac{1}{5}x + 4$ not steep

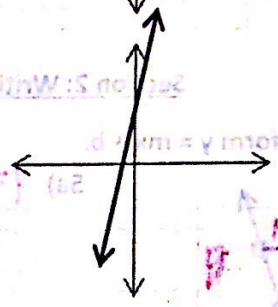
A.



B.



C.



For 11-14, match the graphs with the equations.

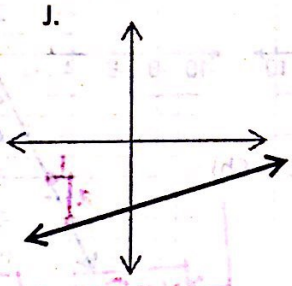
K 11) $y = 3x + 6$

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

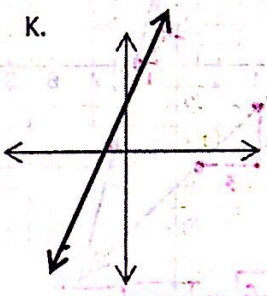
L 13) $y = 3x - 6$

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

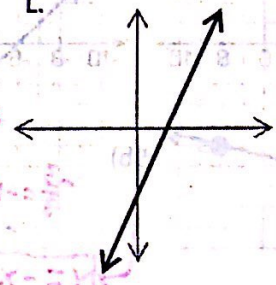
J.



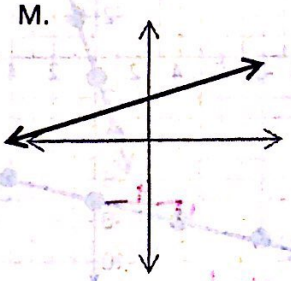
K.



L.



M.



Section 4: Slope-Intercept Story Problems

15) A tree was 3 feet tall when it was planted. It grew 1.5 feet per year.

a. Write an equation in the form **y = mx + b** representing the situation. $y = 1.5x + 3$

b. What is the y-intercept of your equation? What does this represent in the situation? 3; original height of tree

c. What is the slope of your equation? What does this represent in the situation? 1.5; ~~# of feet~~ grown per year

16) You have $80 in your wallet. You spend $5 every minute.

a. Write an equation in the form **y = mx + b** representing the situation. $y = -5x + 80$ or $y = 80 - 5x$

b. What is the y-intercept of your equation? What does this represent in the situation? 80; original amount of money

c. What is the slope of your equation? What does this represent in the situation? −5; spending $5 per minute

17) You set up a lemonade stand. You have made no money yet. You plan to sell cups of lemonade for $0.50 each.

a. Write an equation in the form **y = mx + b** representing the situation. $y = 0.50x$

b. What is the y-intercept of your equation? What does this represent in the situation? 0; you have made $0 so far

c. What is the slope of your equation? What does this represent in the situation? 0.50; money made per cup