

Warm Up:

Find the slope of the line that passes through the points...

(3,-4) and (-2,-1) (-8,6) and (2,4) (3,-1) and (-3,5)

$$\frac{-4+1}{3+2} = \frac{-3}{5}$$

$$\frac{4-6}{2+8} = \frac{-2}{10}$$

$-\frac{1}{5}$

$$\frac{-1-5}{3-(-3)} = \frac{-6}{6}$$

-1

Review homework

- | | |
|--------------------|--------------------|
| 11. -2 | 23. 0 |
| 12. $\frac{1}{3}$ | 24. undefined |
| 13. 4 | 25. 0 |
| 14. $\frac{5}{6}$ | 26. zero |
| 15. $\frac{3}{4}$ | 27. positive; 9 |
| 16. $-\frac{5}{2}$ | 28. negative; -2 |
| 17. 1 | 42. 0 |
| 18. $\frac{1}{2}$ | 43. 6 |
| 19. -1 | |

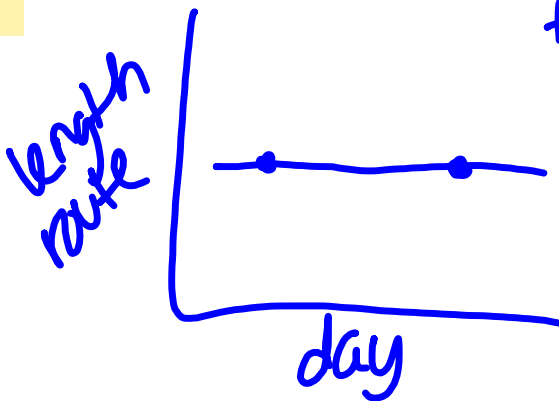
$$(4, 3) \quad (5, y)$$

$$m=3$$

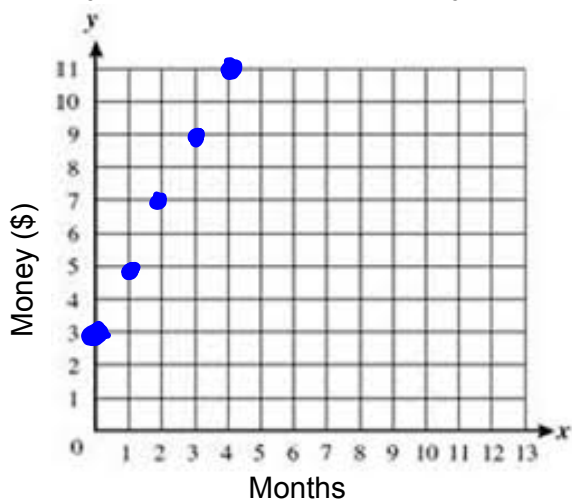
$$y - 3 = 3$$

$$+3 = +3$$

$$y = 6$$



Teddy the three year old has \$3. He gets \$2 every month from his grandparents. Teddy is very responsible and wants to save all of his money and not spend any.



$$y = mx + b$$

slope y int.

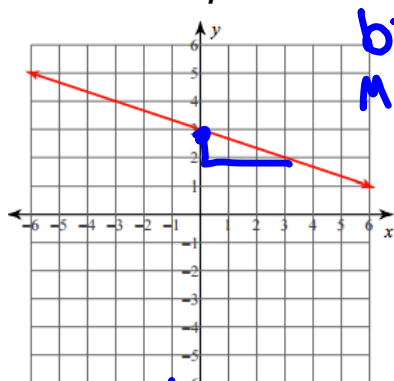
$$y = 2x + 3$$

Slope-Intercept Form: $y=mx+b$

m represents slope b represents y intercept

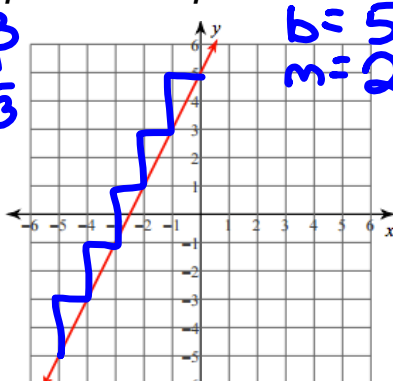
What do x and y represent? all possible points on line

Write an equation in slope intercept form for the lines below:



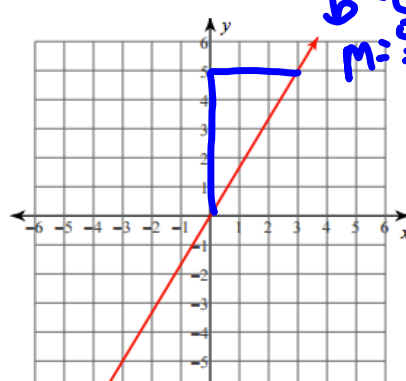
$b=3$
 $m=-\frac{1}{3}$

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



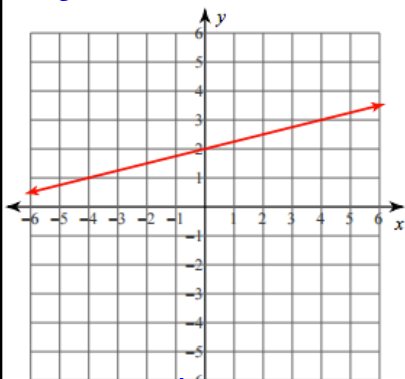
$b=5$
 $m=2$

$$y = 2x + 5$$

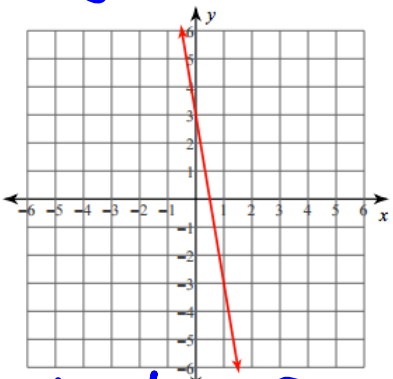


$b=0$
 $m=\frac{5}{3}$

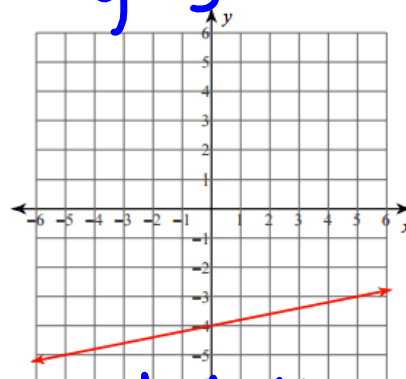
$$y = \frac{5}{3}x$$



$$y = \frac{1}{4}x + 2$$



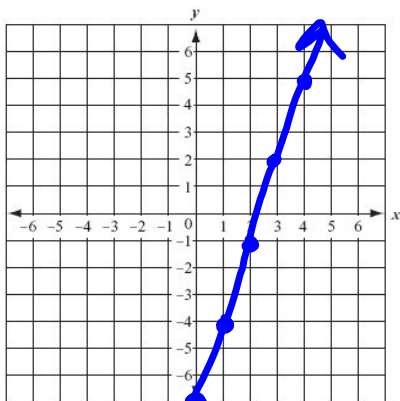
$$y = -6x + 3$$



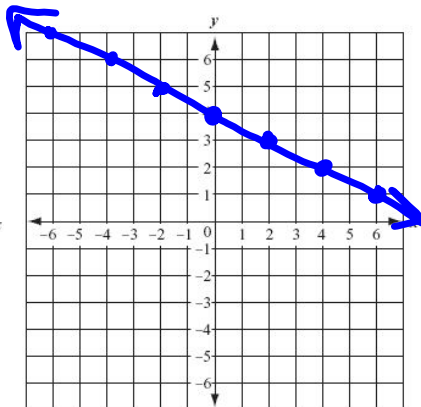
$$y = \frac{1}{5}x - 4$$

Graph each line using slope intercept form: $\uparrow \rightarrow +$ $\downarrow \leftarrow -$

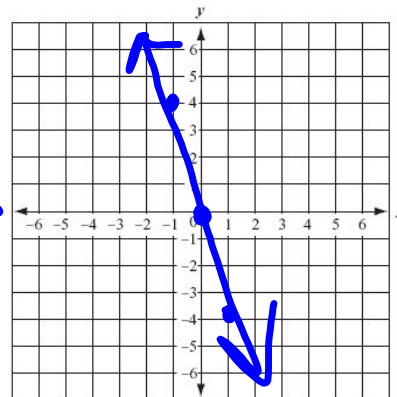
$y=3x-7$
 \uparrow



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

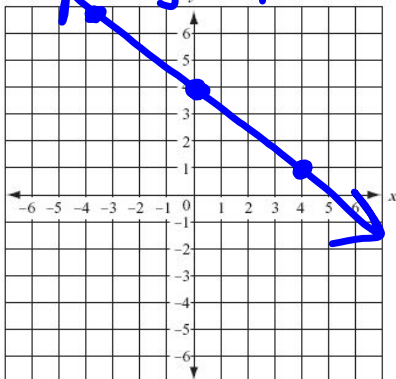


$y=-4x+0$
 \downarrow



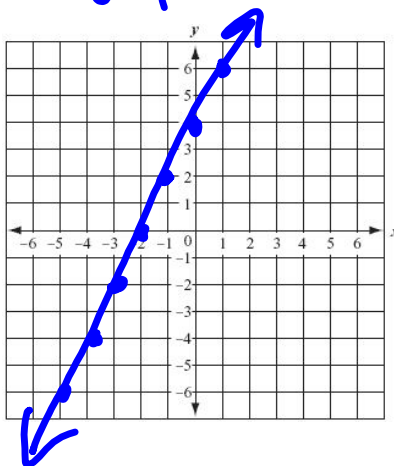
$$3x + 4y = 16$$

$$\begin{array}{r} -3x \\ \hline 4y = -3x + 16 \\ \hline y = -\frac{3}{4}x + 4 \end{array}$$



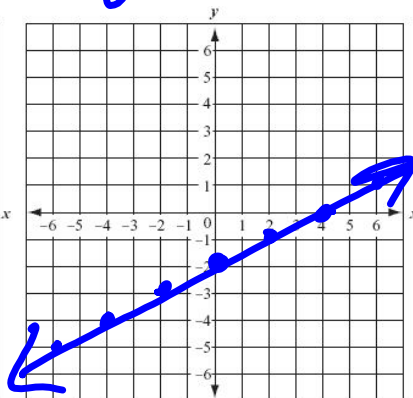
$$y - 2x = 4$$

$$y = 2x + 4$$



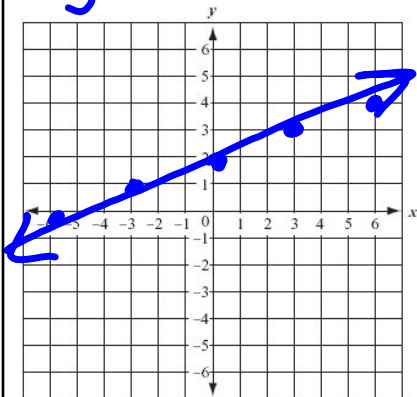
$$-2x + 4y = -8$$

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



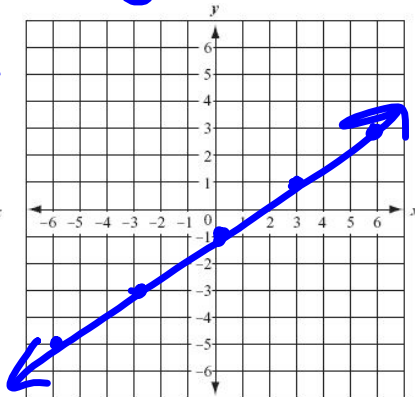
$$-y+2=-\frac{1}{3}x$$

$$y=\frac{1}{3}x+2$$



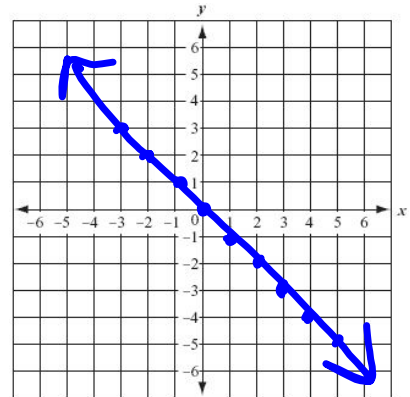
$$-y=-\frac{2}{3}x+1$$

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



$$y=-x$$

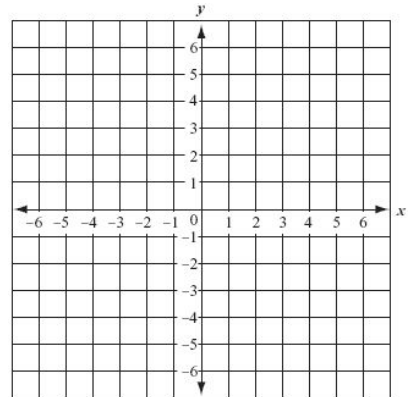
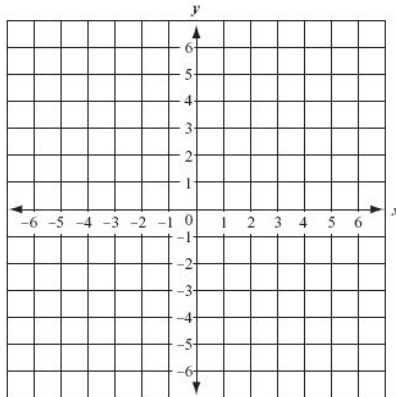
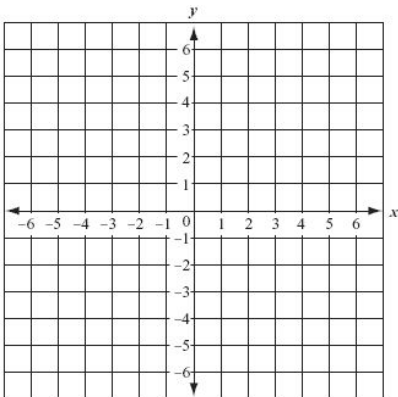
$$y=-\frac{1}{1}x+0$$



$$4y - 8 = -4x$$

$$\frac{5y}{6} = -\frac{1}{3}x + 5$$

$$8y = 8x$$



$$y = -3x + 4$$

$$6 = 2x - 6y$$

$$x = 4y + 4$$

