Warm-Up 11/15/18

Convert each equation to slope intercept form.

1. $4x + 2y = 16$

$-4x \quad -4x$

$\frac{2y}{2} = \frac{-4x}{2} + \frac{16}{2}$

$y = -2x + 8$

2. $5x + 3y = 21$

$-5x \quad -5x$

$\frac{3y}{3} = \frac{-5x}{3} + \frac{21}{3}$

$y = -\frac{5}{3}x + 7$

3. $6x - 3y = 15$

$-6x \quad -6x$

$\frac{-3y}{-3} = \frac{-6x}{-3} + \frac{15}{-3}$

$y = 2x - 5$

4. $3x - 2y = -18$

$-3x \quad -3x$

$\frac{-2y}{-2} = \frac{-3x}{-2} - \frac{18}{-2}$

$y = \frac{3}{2}x + 9$

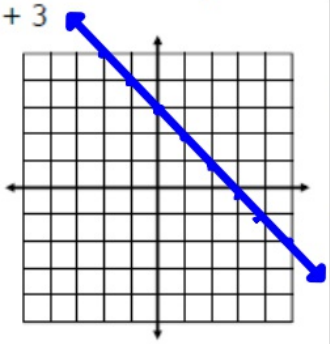
2. Plot the **y-intercept.**
3. Use the **slope** to create more points.
4. Connect into a line!

Graph each linear equation using the slope-intercept method.

1. $y = -x + 3$

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

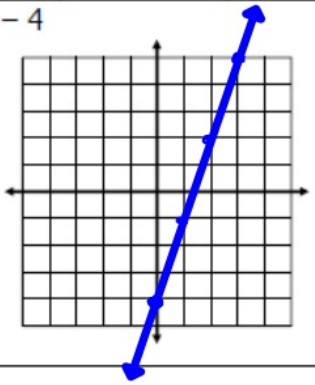
$b = 3$



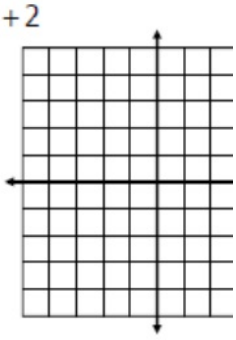
2. $y = 3x - 4$

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

$b = -4$



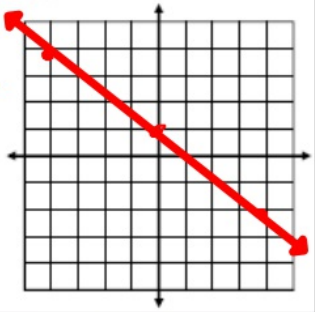
3. $y = \frac{2}{5}x + 2$



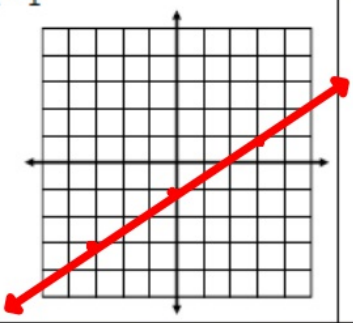
4. $y = -\frac{3}{4}x + 1$

$m = \frac{-3}{4}$

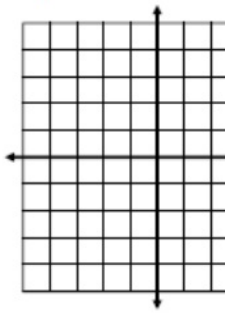
$b = 1$



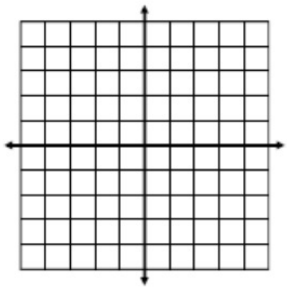
5. $y = \frac{2}{3}x - 1$



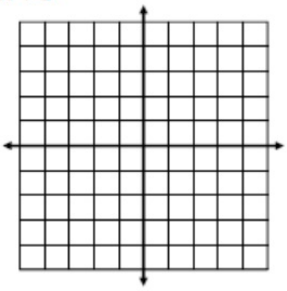
6. $y = -2x + 4$



7. $y = x - 4$



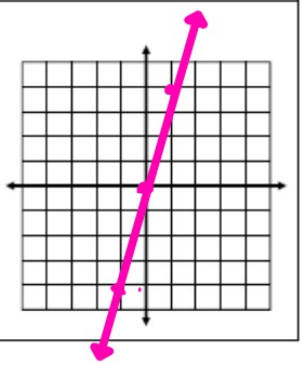
8. $y = -\frac{1}{4}x + 3$



9. $y = 4x$

$m = \frac{4}{1}$

$b = 0$

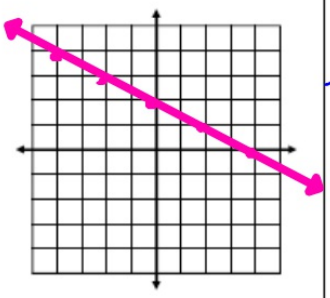


10. $x + 2y = 4$

$-x \quad -x$

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

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

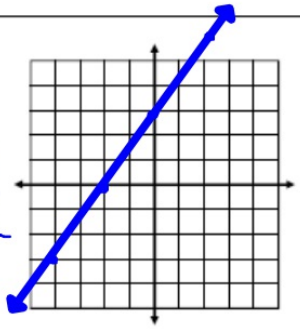


11. $3x - 2y = -6$

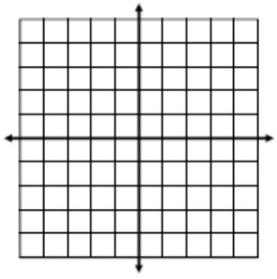
$-3x \quad -3x$

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

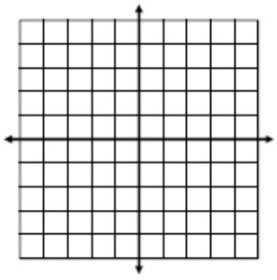
$y = \frac{3}{2}x + 3$



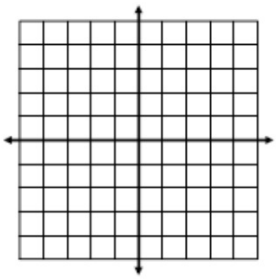
12. $x + y = -2$



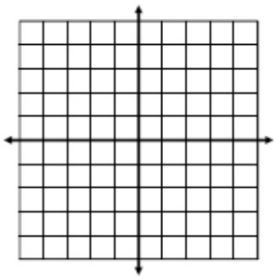
13. $5x - y = -5$



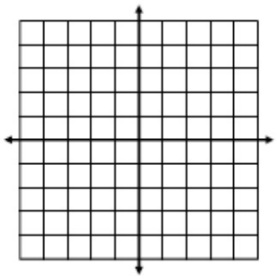
14. $4x + 3y = 12$



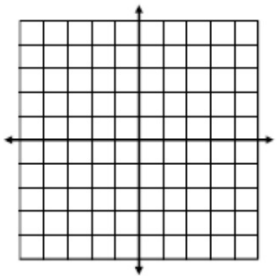
15. $2x - 4y = 8$



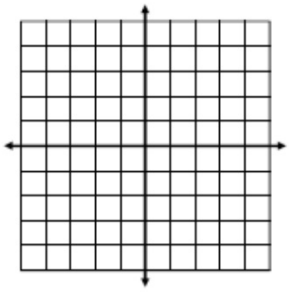
16. $x + 3y = -3$



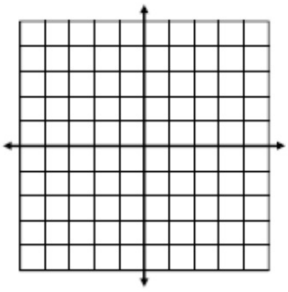
17. $6x - 5y = 15$



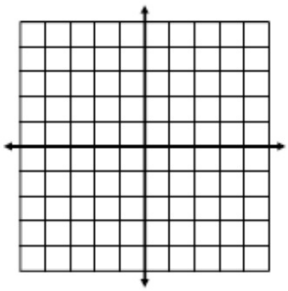
18. $2x + y = 5$



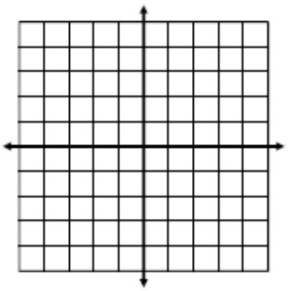
19. $10x - 8y = 24$



20. $9x - 12y = 12$



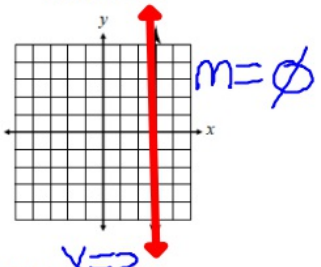
21. $3x + y = 0$



SPECIAL CASES: Vertical & Horizontal Lines

Vertical Lines

A vertical line is written in the form $x = a$, where a represents the line's x-intercept.

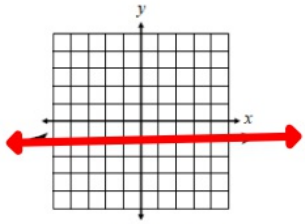


m=∅

In this case, X=3.

Horizontal Lines

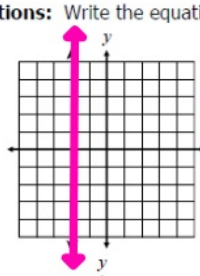
A horizontal line is written in the form $y = a$, where a represents the line's y-intercept.



In this case, y=-1.

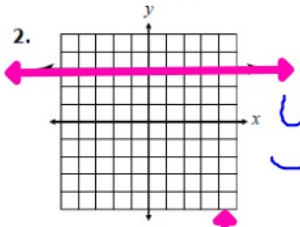
Directions: Write the equation of each line below.

1.



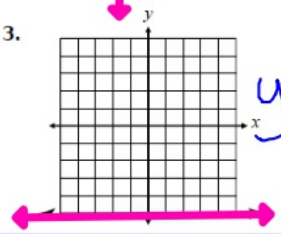
X=-2

2.



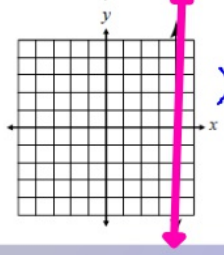
y=3

3.

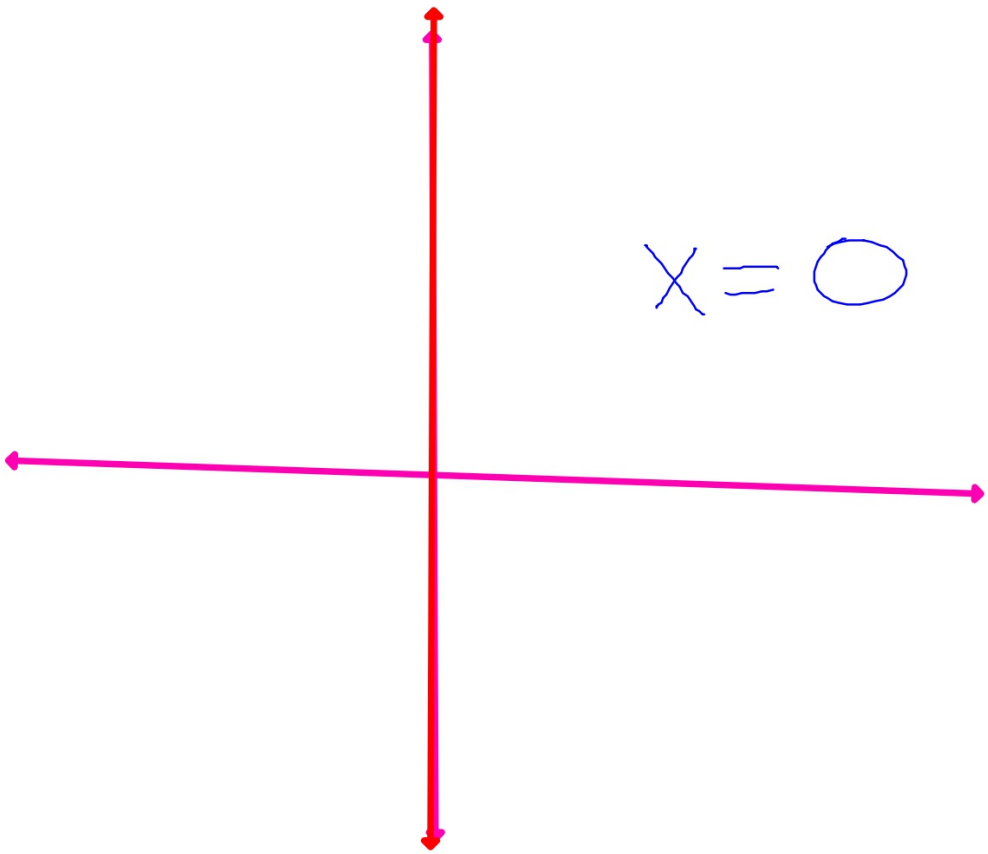


y=-5

4.



x=4


X = 0