

3.4 Graph Linear Functions - Day 2

Recall: Slope Intercept Form

$$y = mx + b$$

slope $\rightarrow m$ y -intercept $\rightarrow b$

Not all equations are in slope intercept form; but they can be rewritten into $y = mx + b$ form

*CANNOT read slope and y -intercept unless in $y = mx + b$ form

Examples: Transform the equation to slope intercept form.

1. $2x + y = 6$
 $y = 6 - 2x$
 $y = -2x + 6$
2. $10x + 2y = 6$
 $2y = 6 - 10x$
 $y = \frac{6}{2} - \frac{10x}{2}$
 $y = 3 - 5x$
 $y = -5x + 3$
3. $6x - y = 7$ $\leftarrow y = 7 - 6x$
 $-y = -6x + 7$
 $y = \frac{-6x}{-1} + \frac{7}{-1}$
 $y = 6x - 7$

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4. $5x - 2y = -4$
 $-2y = -4 - 5x$
 $y = \frac{-4}{-2} - \frac{5x}{-2}$
 $y = 2 + \frac{5}{2}x$
 $y = \frac{5}{2}x + 2$

5. $y + 7 = 8x$
 $y = 8x - 7$

6. $3x + 5y = 15$
 $5y = 15 - 3x$
 $y = \frac{15}{5} - \frac{3x}{5}$
 $y = 3 - \frac{3}{5}x$
 $y = -\frac{3}{5}x + 3$

7. $4x + y = 10$
 $y = 10 - 4x$
 $y = -4x + 10$

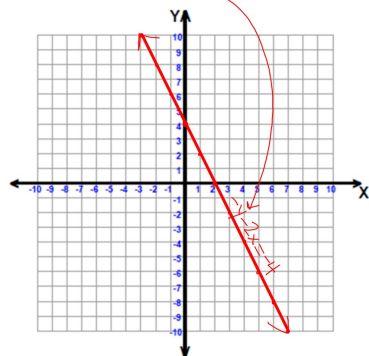
8. $12x + 4y = -16$
 $4y = -16 - 12x$
 $y = \frac{-16}{4} - \frac{12x}{4}$
 $y = -4 - 3x$
 $y = -3x - 4$

9. $-6x + 4y = 8$
 $4y = 6x + 8$
 $y = \frac{6x}{4} + \frac{8}{4}$
 $y = \frac{3}{2}x + 2$

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Examples:

10. Graph: $y - 2x = -4$
 $-y = -4 + 2x$
 $-y = 2x - 4$
 $y = \frac{2x}{-1} - \frac{-4}{-1}$
 $y = -2x + 4$
 $m = \frac{-2}{1}$
 $b = 4$



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11. Graph: $5x + 2y = 6$

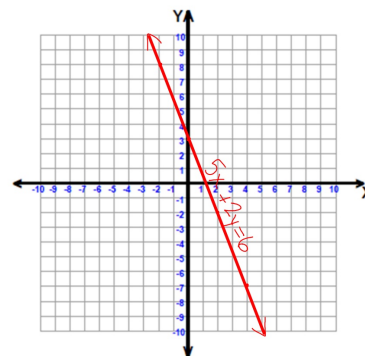
$$2y = -5x + 6$$

$$y = \frac{-5x}{2} + \frac{6}{2}$$

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

$$m = \frac{-5}{2}$$

$$b = 3$$



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HOMEWORK

Worksheet - HW 3.4 - Day 2

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