Name: Key	Date:
Topic:	Class:

Main Ideas/Questions	Notes/Examples

Standard Form

Linear equations are also frequently written in **standard form**:

$$Ax + By = C$$

We will convert these equations to **slope-intercept form** in order to graph. To do this, you must solve the equation for y.

Steps to Convert

1. Add or Subtract the Ax to the other side
2. Then divide or multiply by the B value

Examples

Directions: Rewrite each equation in slope-intercept form.

1. $x + y = -2$

$-x \quad -x$

$y = -x - 2$

2. $-4x + y = 5$

$+4x \quad +4x$

$y = 4x + 5$

3. $5x + 6y = 12$

$-5x \quad -5x$

$\frac{6y}{6} = \frac{-5x}{6} + \frac{12}{6}$

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

4. $-2x + 6y = -24$

$+2x \quad +2x$

$\frac{6y}{6} = \frac{2x}{6} - \frac{24}{6}$

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

5. $3x - 5y = 5$

$-3x \quad -3x$

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

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

6. $x - 2y = 16$

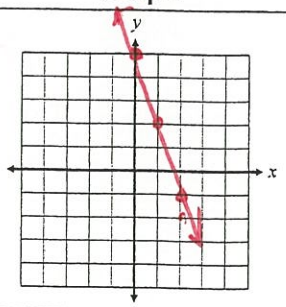
$-x \quad -x$

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

$y = \frac{1}{2}x - 8$

Graphing Practice

Directions: Rewrite each equation in slope-intercept form, then graph.

Convert	Graph
8. $3x + y = 5$ $-3x \quad -3x$ $y = -3x + 5$ $m = -3$ $b = 5$	

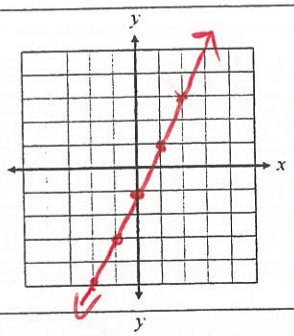
9. $-2x + y = -1$

$+2x \quad +2x$

$y = 2x - 1$

$m = 2$

$b = -1$



10. $5x + 2y = 6$

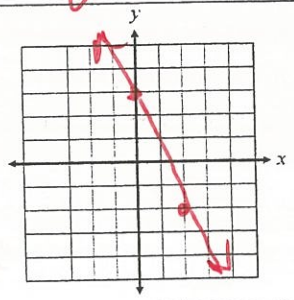
$-5x \quad -5x$

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

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

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

$b = 3$



11. $x + 2y = -6$

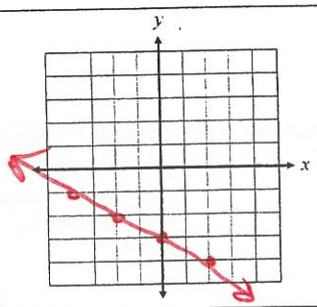
$-x \quad -x$

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

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

$m = -\frac{1}{2}$

$b = -3$



12. $x - y = 5$

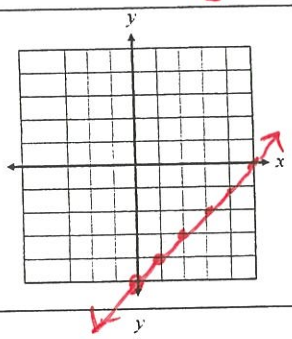
$-x \quad -x$

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

$y = x - 5$

$m = 1$

$b = -5$



13. $-8x - 12y = 0$

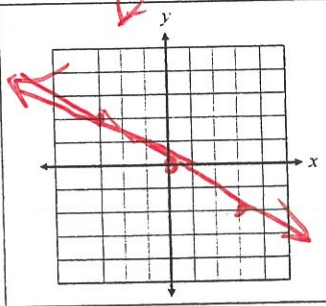
$+8x \quad +8x$

$\frac{-12y}{-12} = \frac{8x}{-12}$

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

$m = -\frac{2}{3}$

$b = 0$



14. $x - 4y = -4$

$-x \quad -x$

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

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

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

$b = 1$