L-1 Math 8 Aim: To re-write linear equations in y = mx + b form (8.EE.6)

Slope-Intercept Form of a Linear Equation

The equation of a line written in the form y = mx + b is said to be in slope-intercept form. To write an equation in slope-intercept form, you need to **isolate y** by using the properties of equality.

Example #1:

Rewrite the equation 4x – 2y = 12 in slope-intercept form.

$4x - 2y = 12$

$-4x \quad -4x$

1. Subtract 4x from each side to isolate y.

$\frac{-2y}{-2} = \frac{-4x}{-2} + \frac{12}{-2}$

2. Simplify.
3. Divide each term by -2 to get y by itself.

$y = 2x - 6$

4. Simplify.

Rewrite each of the following equations in **y = mx + b** form. Show each step!

2) $x + y = -15$

3) $y + 8x = 1$

4) $-2x + y = 1$

5) $3y - 2x = 9$

6) $2y = -1x - 8$

7) $y - 4 = -3(x - 3)$

8) $2x + y = 5$

9) $\frac{1}{4}y + 3 = -5x$

10) $3x + 2y = -6$

11) $3y = 2x + 15$

12) $y - 4x = 8$

13) $y - 8 = -\frac{1}{2}(x + 4)$

14) $3x - 4y = 8$

15) $6x - 2y = 10$

Name _____ Date _____

Rewrite Equations in y = mx + b Form Period _____

Rewrite each of the following equations in slope-intercept form, y = mx + b.

1) $8x - 4y = 20$

2) $2x + 3y = 12$

3) $2x + y = -11$

4) $8x + 4y = 12$

5) $3y = 4x - 27$

6) $x - 4y = 8$

7) $y + 9 = 2(x + 5)$

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