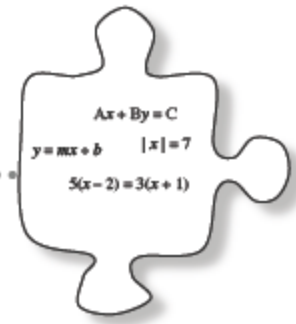


3.3.2 How can I change it to $y = mx + b$ form?

Working With Multi-Variable Equations



So far in this course you have solved several types of equations with one variable. Today you will apply your equation-solving skills to rewrite equations with two or more variables.

WARM UP. Solving linear equations with one variable.

Equations in one variable may be solved in a variety of ways. Commonly, the first step is to simplify by combining like terms. Next isolate the variable on one side and the constants on the other. Finally, divide to find the value of the variable.

a. $2x - 3 = -x + 3$

b. $6 - x - 3 = 4x - 8$

c. $1 + 3x - x = x - 4 + 2x$

d. $2(x + 1) = 3x - 6$

****NEW CONCEPT**

Linear equations with 2-variables: You now have a lot of experience working with equations that compare two quantities, like $y = 3x + 4$. You can find the slope and starting value for $y = 3x + 4$ quickly because the equation is in $y = mx + b$ form. But what if the equation is in a different form? Explore this situation below.

An example of a linear equation in STANDARD FORM

$$-6x + 2y = 10.$$

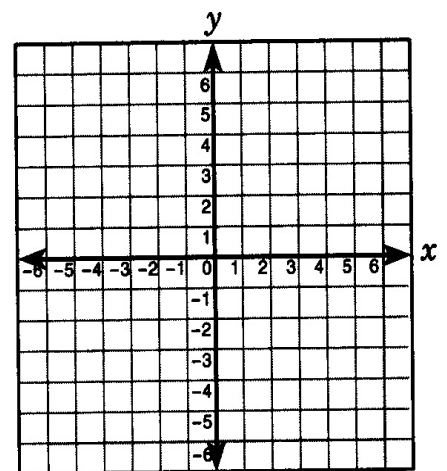
Find the x and y intercepts of the line.

1. To find the x-intercept, let $y = 0$. Solve for x.

2. To find the y-intercept, let $x = 0$. Solve for y.

Find the slope and starting value (y-intercept) of the line.

$$-6x + 2y = 10.$$



Finally – Graph the line!

Turn in for a class work grade

NAME:

Solve each of the following equations for the indicated variable.

Write down all of your steps.

a. Solve for y : $2(y - 3) = 4$	b. Solve for y : $6x - 2y = 12$
c. Solve for y : $6x + y = 2y + 8$	d. Solve for x : $3(2x + 4) = 2 + 6x + 10$

Are you an expert on these, yet?

a. $(x + 2)(3x + 4)$

b. $9x(6 - x^2)$

c. $(3x^2 + 3)(3x^2 + x + 1)$

d. $x(2x^2 - 12x + 7)$