Tuesday: Warm up
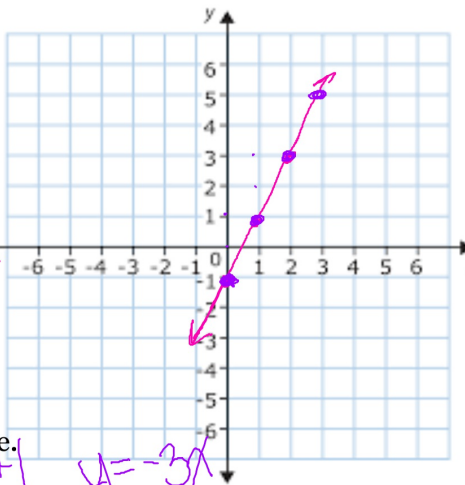
$y = mx + b$

Use the equation: y = 2x + 1

a. What is the slope of the line? **2**

b. What is the y-intercept of the line? **-1**

c. Graph the line on the coordinate plane.

x	y
0	-1
1	1
2	3

d. Write an equation of a line that is steeper than the given line.
$y = 3x + 1$ $y = 4x + 1$ $y = -3x$

Use the Distributive Property to Solve the Equations.

1. $6(x + -3) = 24$

$6x + -18 = 24$
$ +18 \quad +18$
$\dfrac{6x}{6} = \dfrac{42}{6}$
$x = 7$

2. $3(-6n + 5) = 75$

$-18n + -15 = 75$
$ +15 \quad +15$
$\dfrac{-18n}{-18} = \dfrac{90}{-18}$
$n = -5$

Use the Distributive Property to Solve the Equations.

3. $\dfrac{3}{4}(4x + 8) = -12$

$3x + 6 = -12$
$ -6 \quad +-6$
$\dfrac{3x}{3} = \dfrac{-18}{3}$
$x = -6$

4. $-(3x + 12) = 48$

$-3x + 12 = 48$
$ -12 \quad -12$
$\dfrac{-3x}{-3} = \dfrac{36}{-3}$
$x = -12$

A store had homemade sweaters on sale for $20 off the original price. Aunt Ethel jumped at the bargain and bought a sweater for all 15 members of her family. Aunt Ethel paid $375 for all of the sweaters. Write and solve an equation to find the original price for each sweater.

* x = the original price for a sweater
$15(x + -20) = 375$

$15x + -300 = 375$
$ +300 \quad +300$
$\dfrac{15x}{15} = \dfrac{675}{15}$
$x = 45$

The original price of the sweater was $45.