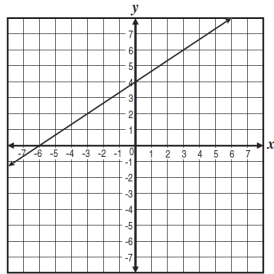


# Warm-Up

<b>CST/CAHSEE:</b> (Alg 6.0)	<b>Review:</b> (Alg 6.0)
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Which equation represents the line shown in the graph below?



A  $y = \frac{2}{3}x + 4$

B  $y = \frac{2}{3}x - 6$

C  $y = \frac{3}{2}x + 4$

D  $y = \frac{3}{2}x - 6$

Determine the slope and y-intercept of the following linear equation.

$$x - 2y = 6$$

<b>Current:</b> (Alg 6.0)	<b>Other:</b> (Alg 6.0)
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What is the equation of the line that has a slope of 4 and passes through the point  $(-3, 10)$ ?

A  $y = 4x - 22$

B  $y = 4x + 22$

C  $y = 4x - 43$

D  $y = 4x + 43$

What is the x-intercept of the line defined by  $-2x + 3y = 12$ ?

A  $-6$

B  $-4$

C  $4$

D  $6$

Standard Form: Discover the slope of a line in standard form using the x and y-intercepts.

Standard Form of a linear equation is  $Ax + By = C$ , where A, B, and C are integers; A and B are not zero.

Part I: Find the x and y-intercepts of the given lines. Graph each line and determine its slope.

1. $x + y = 2$	Find x intercept Let $y = 0$	Find y intercept Let $x = 0$	Graph	Slope $m = \frac{\text{rise}}{\text{run}}$
	$x + 0 = 2$ $x + 0 = 2$ $x = 2$ $(2, 0)$	$x + y = 2$ $0 + y = 2$ $y = 2$ $(0, 2)$		$m = \frac{2}{-2}$ $= -1$
YOU TRY!				
2. $4x + y = 4$	$4x + y = 4$ $4x + 0 = 4$ $4x = 4$ $\frac{4x}{4} = \frac{4}{4}$ $x = 1$ $(1, 0)$	$4x + y = 4$ $4(0) + y = 4$ $0 + y = 4$ $y = 4$ $(0, 4)$		$m = \frac{4}{-1}$ $= -4$
3. $x - 4y = 4$	$x - 4y = 4$ $x - 4(0) = 4$ $x - 0 = 4$ $x = 4$ $(4, 0)$	$x - 4y = 4$ $0 - 4y = 4$ $-4y = 4$ $\frac{-4y}{-4} = \frac{4}{-4}$ $y = -1$ $(0, -1)$		$m = \frac{1}{4}$
YOU TRY!				
4. $3x - 3y = 6$	$3x - 3y = 6$ $3x - 3(0) = 6$ $3x - 0 = 6$ $3x = 6$ $\frac{3x}{3} = \frac{6}{3}$ $x = 2$ $(2, 0)$	$3x - 3y = 6$ $3(0) - 3y = 6$ $0 - 3y = 6$ $-3y = 6$ $\frac{-3y}{-3} = \frac{6}{-3}$ $y = -2$ $(0, -2)$		$m = \frac{2}{2}$ $= 1$

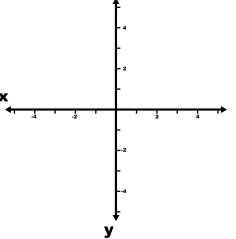
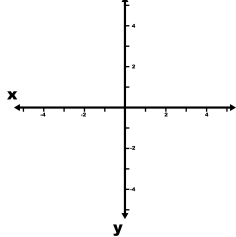
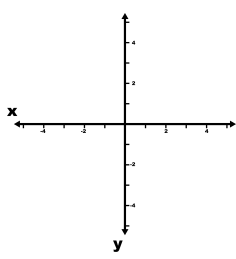
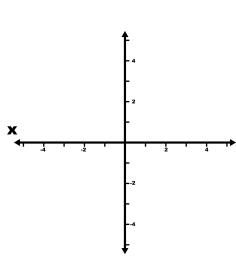
Part 2 "We are going to discover how the coefficients of  $x$  and  $y$  relate to the slope of a line."

Fill in the chart using the information above.

	Standard Form	Coefficient of $x$	Coefficient of $y$	Slope
1.	$x + y = 2$	1	1	-1
2.	$4x + y = 4$	4	1	-4
3.	$x - 4y = 4$	1	-4	$\frac{1}{4}$
4.	$3x - 3y = 6$	3	-3	1
5.	$Ax + By = C$	A	B	$-\frac{A}{B}$

Explain your results: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Part 1: Find the x and y intercepts of the given lines. Graph each line and determine its slope.

1. $x + y = 2$	Find x intercept	Find y intercept	Graph	Slope $m = \frac{\text{rise}}{\text{run}}$
				
YOU TRY!				
2. $4x + y = 4$				
3. $x - 4y = 4$				
YOU TRY!				
4. $3x - 3y = 6$				

Part 2: Fill in the chart using the information above.

	Standard Form	Coefficient of x	Coefficient of y	Slope
1.	$x + y = 2$			
2.	$4x + y = 4$			
3.	$x - 4y = 4$			
4.	$3x - 3y = 6$			
5.	$Ax + By = C$			

Explain your results: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_