

Learning Activity – Sections 5.4 & 5.5 – Linear Equations in 2 Variables

Names: _____

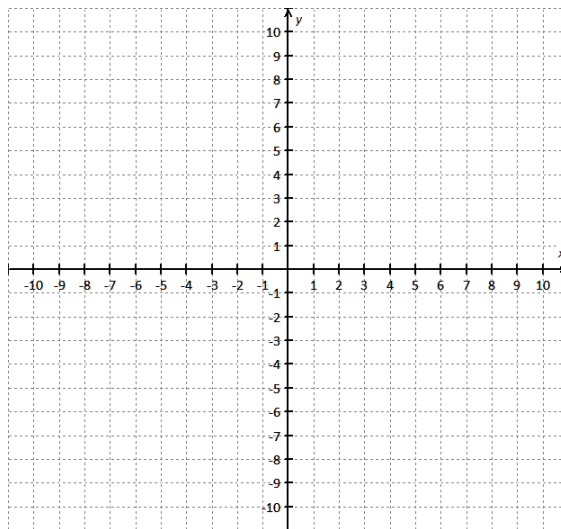
1. Use the equations, expressions, and words in the box below to fill in the blanks that follow. Some items may be used more than once, other items may not be used at all.

x	y	$y = mx + b$	zero
$x = 0$	$y = 0$	$m = \frac{y_2 - y_1}{x_2 - x_1}$	undefined
$x = \text{a real number}$	$y = \text{a real number}$	negative	horizontal
$Ax + By = C$	$y - y_1 = m(x - x_1)$	positive	vertical

- a. If the slope of a line is undefined, then the equation of the line will look like _____ .
- b. A linear equation in standard form looks like _____ .
- c. To find the y -intercept of a line, substitute _____ and then solve for the other variable.
- d. The slope-intercept form of the equation of a line looks like _____ .
- e. To find the x -intercept of a line, substitute _____ and then solve for the other variable.
- f. The equation of a horizontal line looks like _____ .
- g. The slope of a vertical line is _____ .
- h. The slope formula looks like _____ .
- i. The slope of a slanted line is a _____ or _____, real number.
- j. The point-slope formula looks like _____ .
- k. The slope of a horizontal line is _____ .
- l. $\frac{5}{0}$ is _____ .

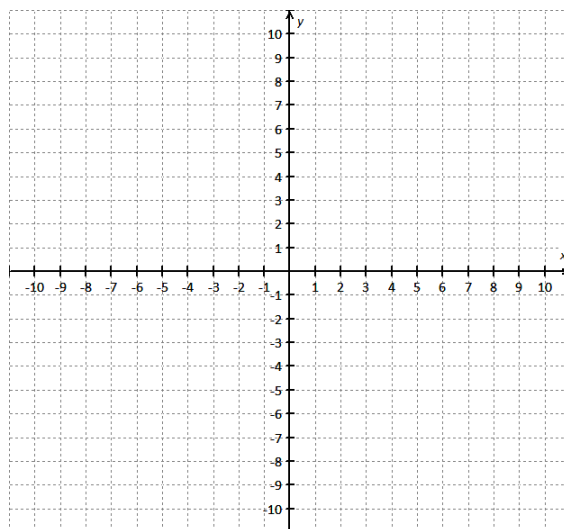
2. Find the x -intercept, y -intercept, and two other points on the graph of the given equation. Plot the points on the coordinate system, and graph the line.

$6x - 9y = 36$	x	y
x -intercept		
y -intercept		
1 st other point		
2 nd other point		



3. Graph the equations. Label each graph on the coordinate system with its equation.

a. $8x - 17 = -1$



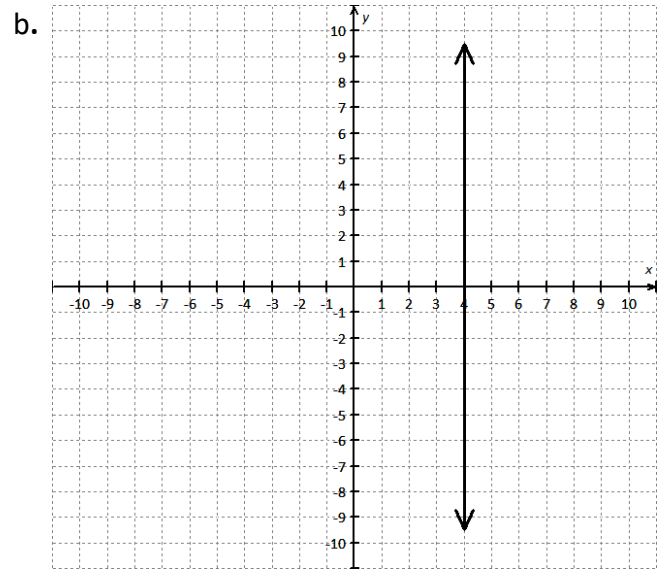
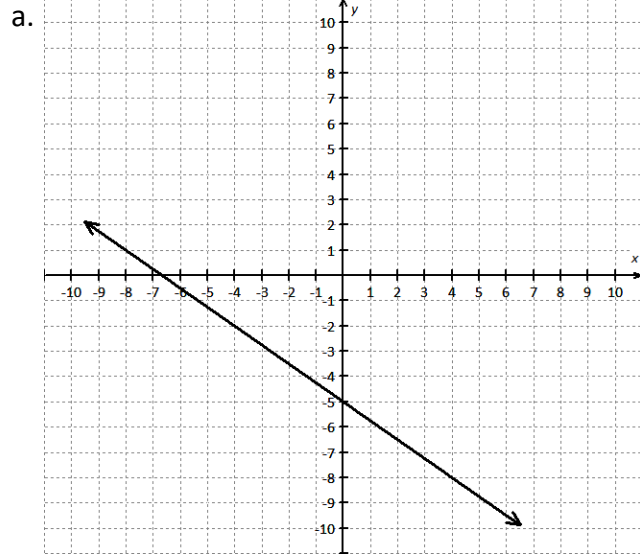
b. $-4y + 1 = 21$

4. Find the slope of each line containing each given pair of points.

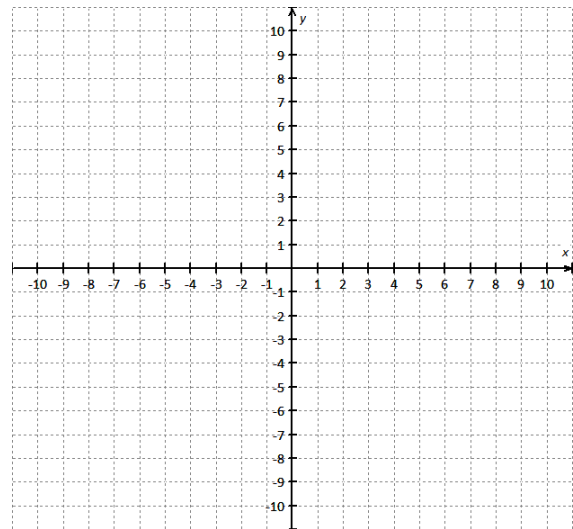
a. $(-2, 3)$ and $(4, 7)$

b. $(-1, 5)$ and $(-1, -3)$

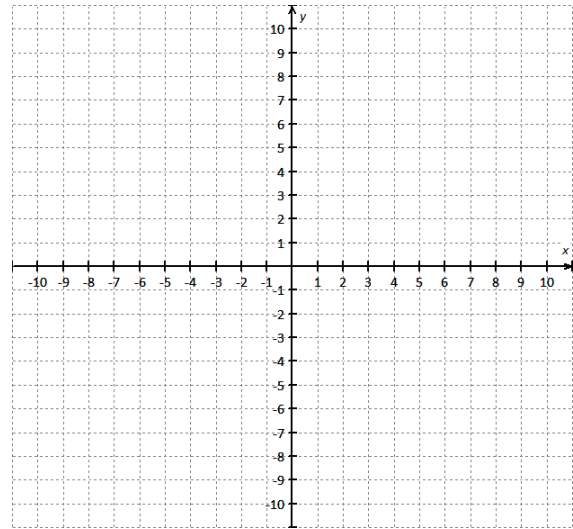
5. Determine the slope of each line.



6. Write the equation in slope-intercept form and then graph the line using the slope and y -intercept. $-2x - 3y = -15$.



7. Write the equation in slope-intercept form and then graph the line using the slope and y-intercept. $5x - y = 0$.



8. Write the equation of the line with slope of 6, passing through the point $(3, 8)$.
9. Write the equation of the line with undefined slope, passing through the point $(-6, -3)$.
10. Write the equation of the line passing through the points $(-1, 8)$ and $(4, -17)$.
11. Write the equation of the line passing through the points $(8, -4)$ and $(0, -4)$.