

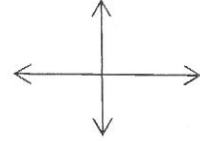
Name: _____

Period: _____

What I should know from Algebra I?

PART I

1. Draw the coordinate plane and clearly label the x and y axes.



- a. List any four ordered pairs on the x-axis. _____
- b. What do they have in common? _____
- c. Write the equation of this line (x-axis). _____
- d. List any four ordered pairs on the y-axis. _____
- e. What do they have in common? _____
- f. Write the equation of this line (y-axis). _____

2. What is the slope of a line? _____

a. Write the formula to find slope of a line:

- b. Find the slope of a line that contains the points (3, -2) and (1, 2). _____
- c. Find the slope of a line that contains the points (2, 6) and (1, 6). _____
- d. Find the slope of a line that contains the points (4, 2) and (4, 3). _____

3. What is Slope-Intercept Form of a line? _____

4. What is Standard Form of a line? _____

5. What is Point-Slope Form of a line? _____

6. Each of the following equations is an equation of a line. Accurately sketch each line and find its slope, x-intercept, and y-intercept, where possible.

a. $x = 4$ slope = _____

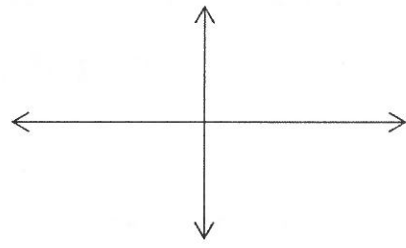
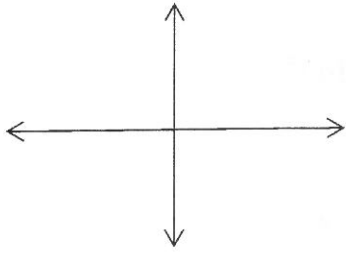
x-intercept = (____, ____)

y-intercept = (____, ____)

b. $y = -2$ slope = _____

x-intercept = (____, ____)

y-intercept = (____, ____)



7. In the following examples, the equations are in Standard Form. First, rewrite the equation in Slope-Intercept Form. Accurately sketch each line and find its slope, x-intercept, and y-intercept, where possible.

a. $2x - 3y = 12$ slope = _____

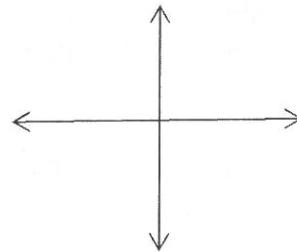
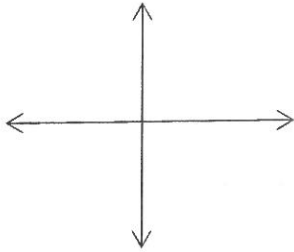
x-intercept = (____, ____)

y-intercept = (____, ____)

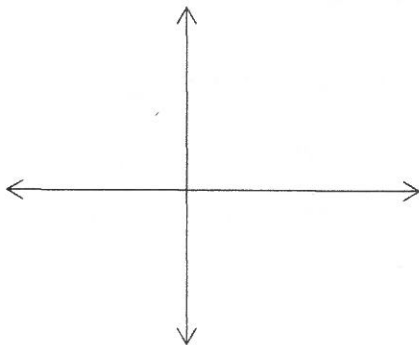
b. $3x + y = 6$ slope = _____

x-intercept = (____, ____)

y-intercept = (____, ____)



8. Sketch the line with x-intercept (4,0) and y-intercept (0,5). Find the slope of this line. _____ Find the slope of a line parallel to this line. _____ Find the slope of a line perpendicular to this line. _____



9. Find the slope and y-intercept of the line with the equation given below. Rewrite the equation in Slope-Intercept Form, if necessary.

a. $y = \frac{1}{2}x + 7$ _____ _____ _____

b. $3x + y = 6$ _____ _____ _____

c. $4x - 2y = 8$ _____ _____ _____

10. The slopes of two lines are given. Determine if the the lines are parallel, perpendicular, or neither.

a. $\frac{2}{4}, \frac{3}{6}$ _____

b. $5, -\frac{1}{5}$ _____

c. $\frac{3}{7}, \frac{7}{3}$ _____

d. $1, -1$ _____

11. Write the equation of the line with slope $\frac{1}{2}$ and passes through ordered pair (0, -8).

12. Write the equation of the line that passes through ordered pairs (-1,7) and (-3, 11).
