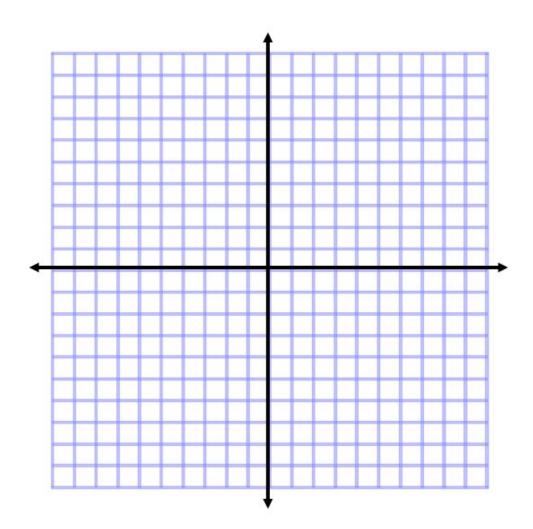
## Review on Systems of equations

1. Do the equations x+y=-2 and 3x+3y=-6 define the same line? Explain.

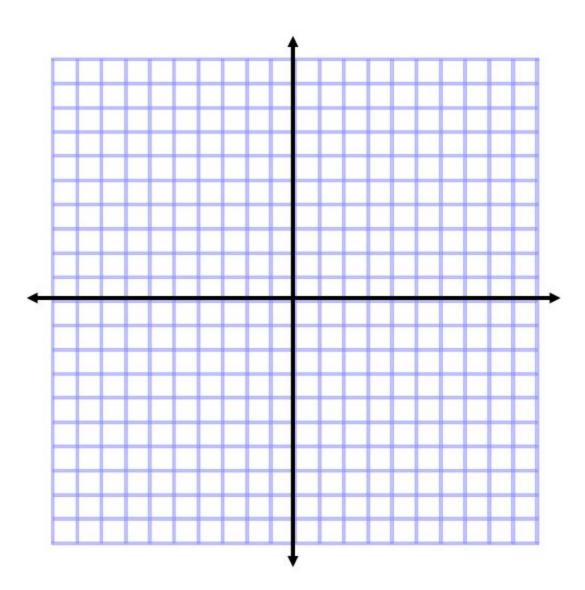
- 2. Jake and Josh run at constant speeds. Jake can run 1 mile in 8 minutes and josh can run 3 miles in 33 minutes. Jake started running 10 minutes after Josh. Assuming they run the same path, when will Jake catch up to Josh?
  - a. Write two equations for the speed.
  - b. Y is distance travel, x is minutes running
  - c. Graph the two equations



Name:\_\_\_\_\_

3. Sketch the graphs of the linear systems on the plane

a. 
$$y = \frac{1}{3}x + 1$$
 And  $y = -3x + 11$ 



- b. What is the coordinate pair of where the two lines intersect?
- 4. Does the system below have a solution? Explain without graphing

a. 
$$2x + 5y = 9$$
 and  $-4x - 10y = 4$ 

5. How many solutions does the following systems of equations have? Explain.

a. 
$$y = \frac{3}{7}x - 8$$
 and  $3x - 7y = 1$ 

6. Use elimination to solve the following systems of equations

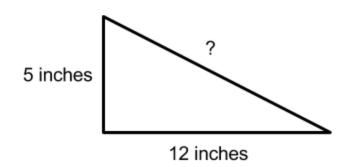
a. 
$$9x + 2y = 9$$
 and  $-3x + y = 2$ 

7. Use substitution to solve the following systems of equations

a. 
$$y = \frac{4}{3}x - 9$$
 and  $y - x = 3$ 

8. A math test is worth 100 points. There is a total of 26 questions. There are spelling word questions that are 2 points each and vocabulary word questions worth 5 points each. How many of each type of question are there?

9. Find the missing side of the triangle.



a.