

Name: _____

Date: _____

UNIT 3**LESSON 5****DO NOW**

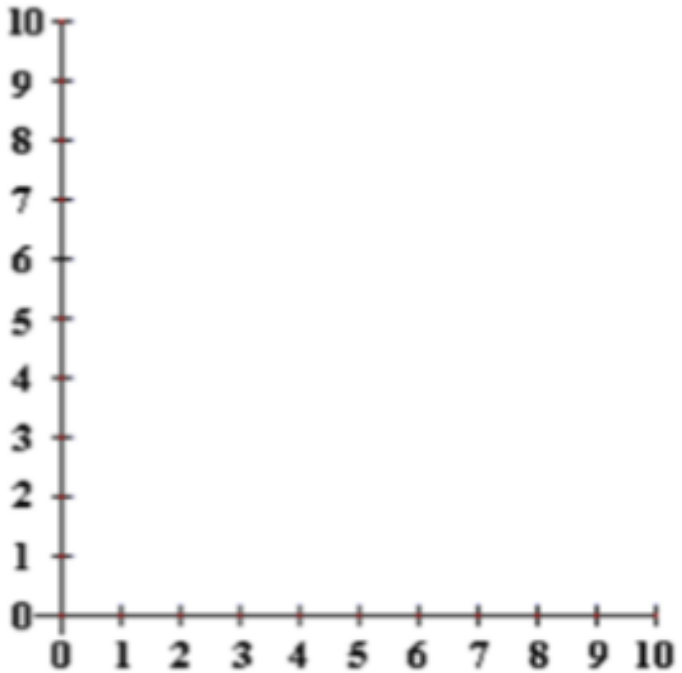
a. Which value would be a solution for x in the inequality $47 - 4x < 7$?

- 1) -13 2) -10 3) 10 4) 11

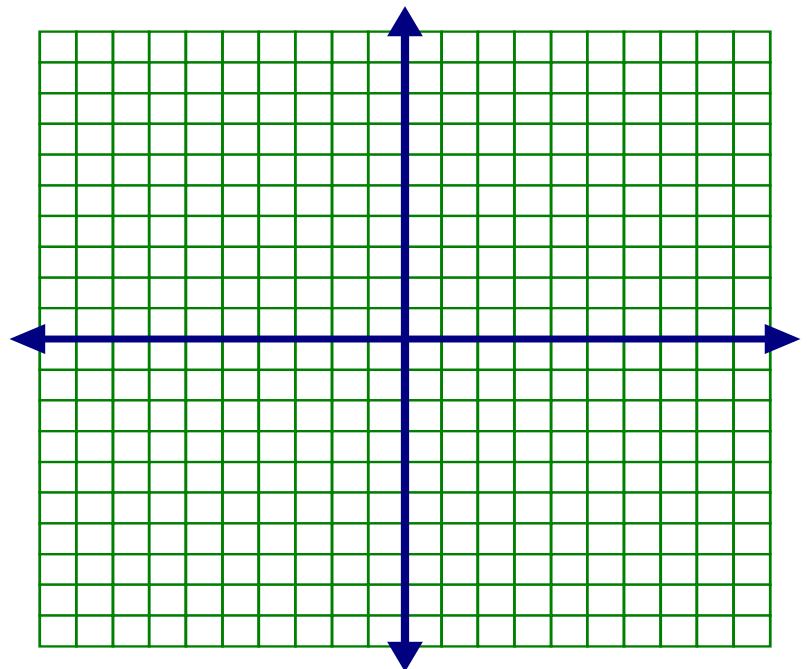
b. Is $(-3, 2)$ a solution of $-4x - 10y < -9$? Justify your answer.

AIM: GRAPHING A LINEAR INEQUALITY

1. There is enough space in your garden to plant a maximum of ten plants. You want to plant watermelons & pumpkins. List the possible combinations of the number of watermelons and pumpkins you could plant. Graph the results of the possible combinations of plants.



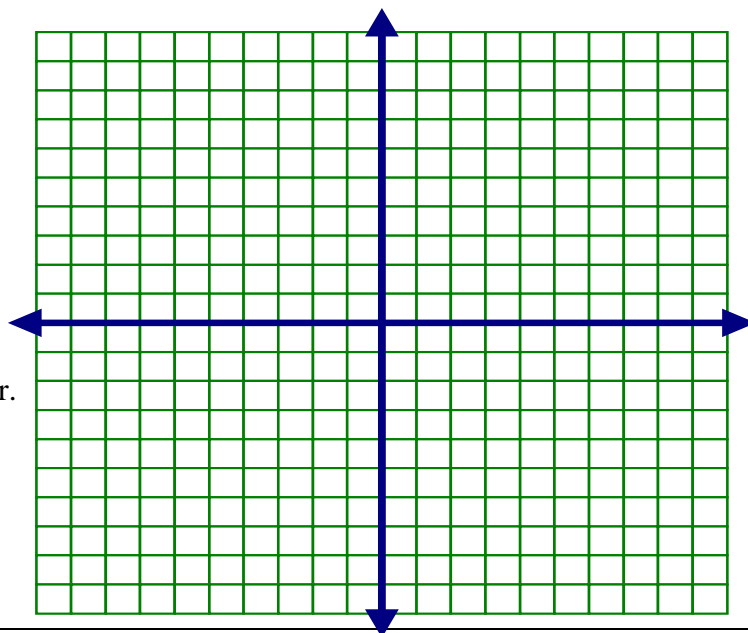
2. Graph the solution set for the inequality:
 $4x - y < 10$



3. a. Graph the solution set for the inequality.

$$y + 3 \geq -x$$

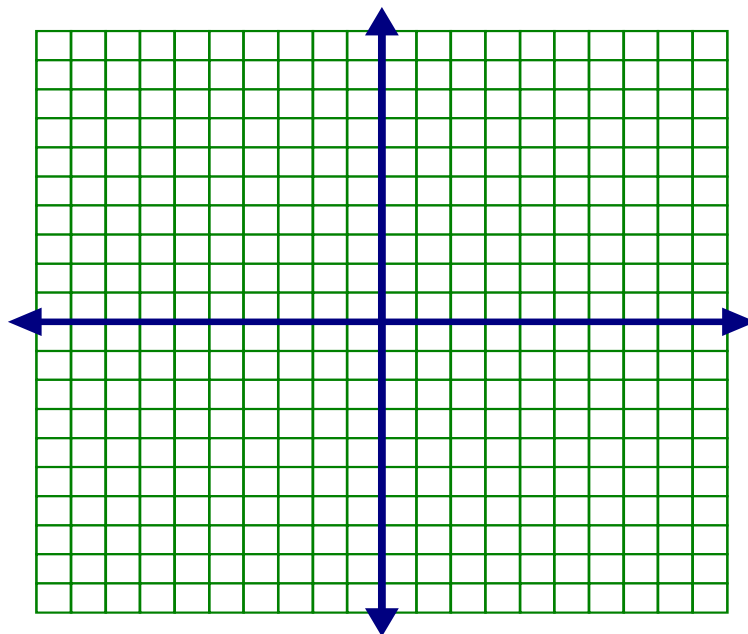
- b. Is (0,-3) in the solution set? Justify your answer.



4. a. Graph the solution set for the inequality.

$$x \geq -2$$

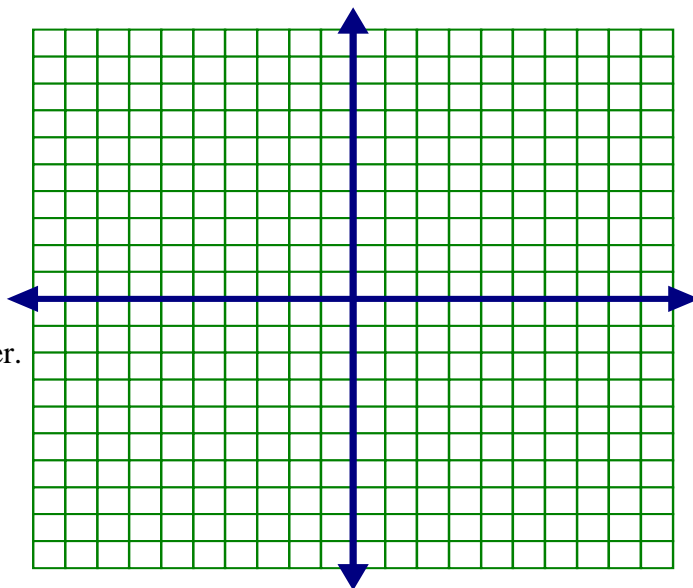
- b. Determine a point NOT in the solution set.
Explain your answer.



5. a. Graph the solution set for the inequality.

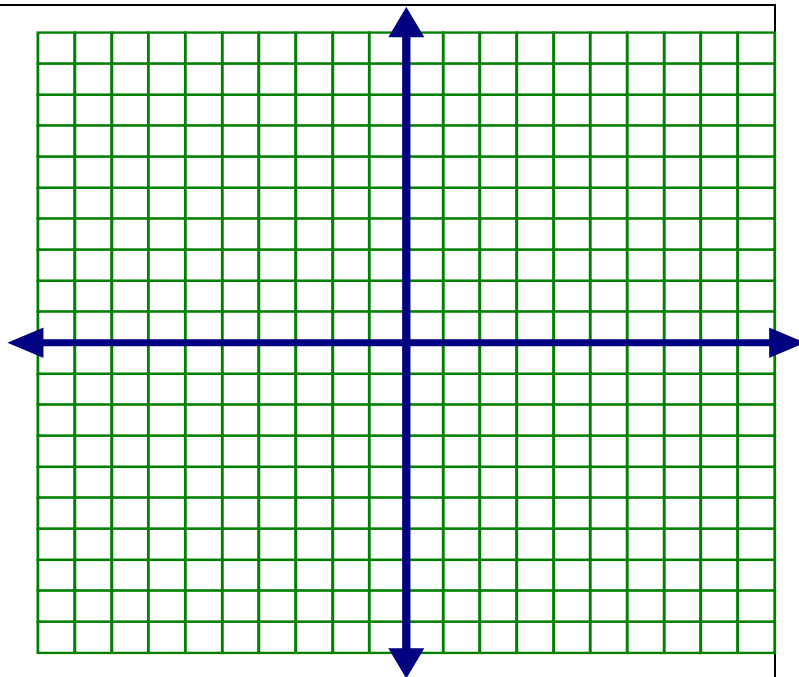
$$y < 3$$

- b. Is (0,100) in the solution set? Explain your answer.



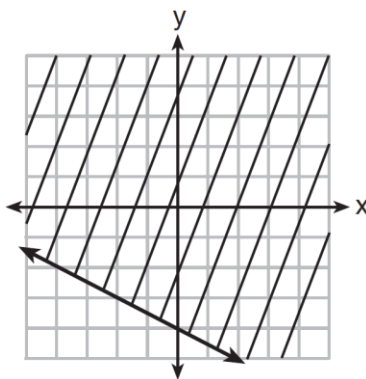
6. a. Graph the solution set for the inequality.

$$-3y - 2x > -6$$

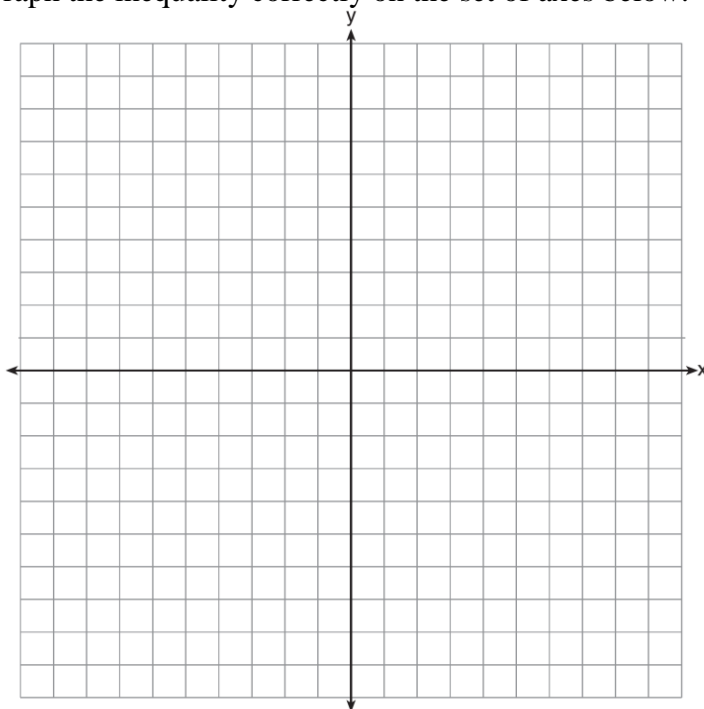


- b. Determine a point in the solution set.

7. Shawn incorrectly graphed the inequality $-x - 2y \geq 8$ as shown below.



Explain Shawn's mistake. Graph the inequality correctly on the set of axes below.



When you graph a linear inequality you determine the type of line and the shading by the chart below:

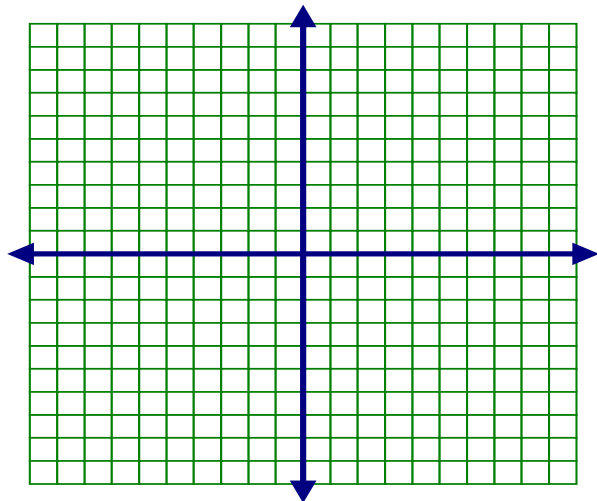
| Inequality Symbol | Type of Line | Meaning | Shading a Diagonal or Horizontal Line | Shading a Vertical Line |
|--------------------------|---------------------|--|--|--------------------------------|
| | Solid Line | The points on the line satisfy the inequality | Below | Left |
| | Solid Line | The points on the line satisfy the inequality | Above | Right |
| | Dashed Line | The points on the line does NOT satisfy the inequality | Below | Left |
| | Dashed Line | The points on the line does NOT satisfy the inequality | Above | Right |

Name: _____

EXIT TICKET

- 1) Graph and state a solution set for:

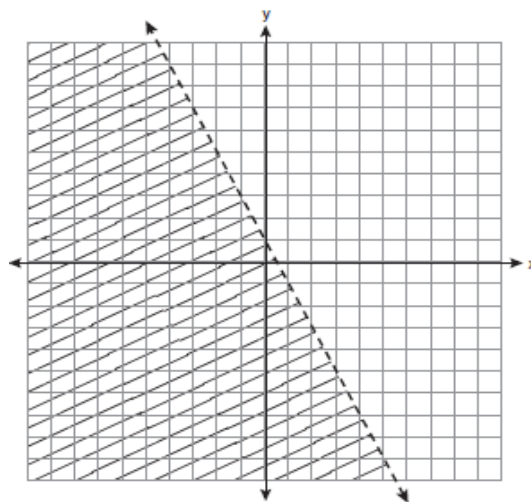
$$y > x$$



- 2) Given the graph below:

- (a) Identify one solution and explain why it's a solution.

- (b) Identify one point that it is NOT a solution and explain why it's NOT a solution.

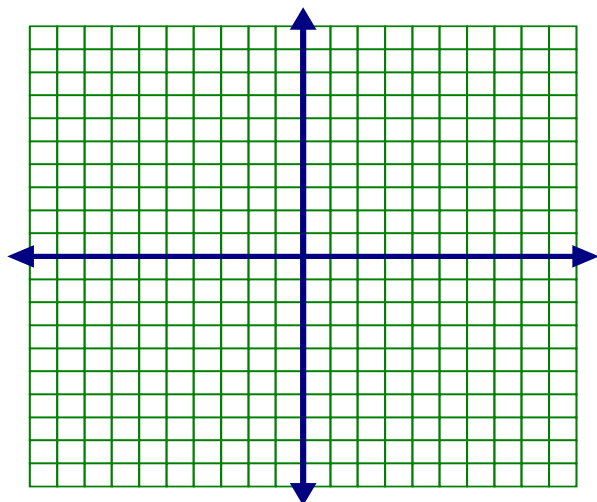


Name: _____

EXIT TICKET

- 1) Graph and state a solution set for:

$$y > x$$



- 2) Given the graph below:

- (a) Identify one solution and explain why it's a solution.

- (b) Identify one point that it is NOT a solution and explain why it's NOT a solution.

