

READY, SET, GO!

Name _____

Period _____

Date _____

READY

Topic: Determining if given values are solutions to a two variable equation.

Identify which of the given points are solutions to the following linear equations.

1. $3x + 2y = 12$

- a. (2, 4)
- b. (3, 2)
- c. (4, 0)
- d. (0, 6)

2. $5x - y = 10$

- a. (2, 0)
- b. (3, 0)
- c. (0, -10)
- d. (1, 1)

3. $-x + 6y = 10$

- a. (-4, 1)
- b. (-22, -2)
- c. (2, 2)
- d. (10, 0)

Find the value that will make each ordered pair be a solution to the given equation.

4. $x + y = 6$

- a. (2, ___)
- b. (0, ___)
- c. (___, 0)

5. $2x + 4y = 8$

- a. (2, ___)
- b. (0, ___)
- c. (___, 0)

6. $3x - y = 8$

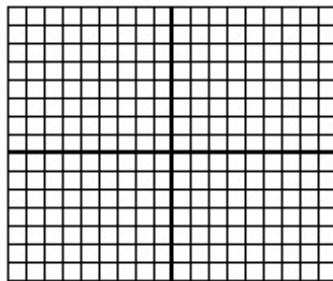
- a. (2, ___)
- b. (0, ___)
- c. (___, 0)

SET

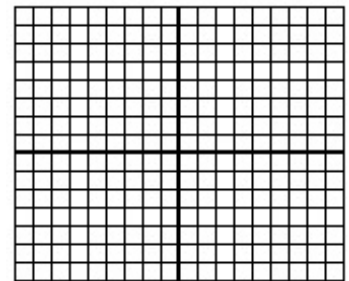
Topic: Graphing linear inequalities

Graph the following inequalities on the coordinate plane. Name one point that is a solution to the inequality and one point that is not a solution. Show algebraically and graphically that your points are correct.

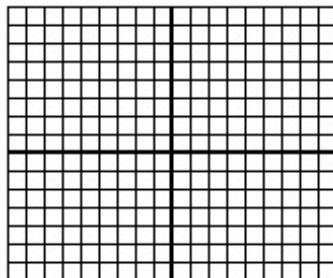
7. $y \leq 3x + 4$



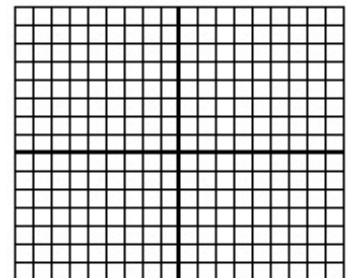
8. $y < 7x - 2$



9. $y > \frac{-3}{5}x + 2$



10. $y \geq -6$



GO

Topic: Solving inequalities

Follow the directions for each problem below. (Show your work!)

11. $10 - 3x < 28$

a) Solve for x . Then graph the solution on the number line.



b) Select an x -value from your graph of the solution of the inequality. Replace x in the original inequality $10 - 3x < 28$ with your chosen value. Does the inequality hold true?

c) Select an x -value that is outside of the solution set on your graph. Replace x in the original inequality $10 - 3x < 28$ with your chosen value. Does the inequality still hold true?

12. $4x - 2y \geq 6$

a) Solve for y .

b) Rewrite your inequality as an equation. In other words, your solution will say $y =$, instead of $y \geq$ or $y \leq$.
When you use the equal sign, the expression represents the equation of a line.

c) Graph the line that goes with your equation.

d) Name the y -intercept.

e) Identify the slope.

f) Select a point that is above the line. (,)

g) Replace the x -value and y -value of your chosen point in the inequality $4x - 2y \geq 6$.

h) Is the inequality still true?

i) Select a point that is below the line. (,)

j) Replace the x -value and y -value of your chosen point in the inequality $4x - 2y \geq 6$.

k) Is the inequality still true?

l) Explain which side of the line should be shaded.

m) Decide whether the line should be solid or dotted. Justify your decision.

