

Ready, Set, Go!**Ready**

Topic: Determining if given values are solutions to an 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)

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

3. $x + y = 6$

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

4. $2x + 4y = 8$

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

5. $3x - y = 8$

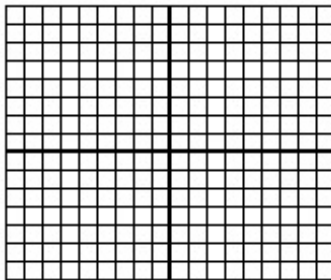
- a. (2,)
- b. (0,)
- c. (, 0)

Set

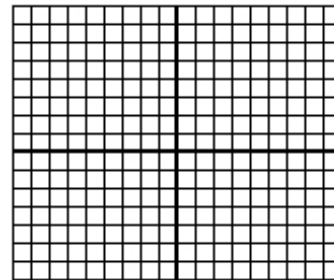
Topic: Graph linear inequalities

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.

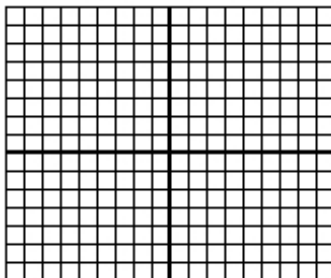
6. $y \leq 3x + 4$



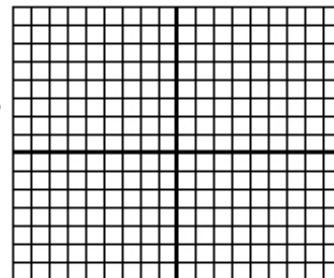
7. $x < 7$



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



9. $y \geq -6$



Go Topic: Solving inequalities

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

10. $10 - 3x < 28$ 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?

11. $4x - 2y \geq 6$

a. Solve for y.

b. Now imagine that your inequality is an equation. In other words, your solution will say $y =$, instead of $y \geq$ or $y \leq$. With the equal sign, it should be the equation of a line. Graph your equation.

c. Find the y - intercept.

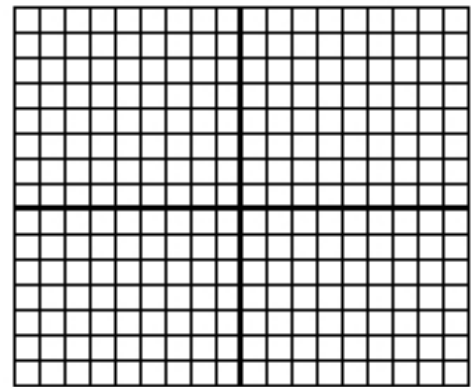
d. Find the slope.

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

Replace the x and y - values in the inequality $4x - 2y \geq 6$.
Is the inequality still true?

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

Replace the x and y - values in the inequality $4x - 2y \geq 6$.
Is the inequality still true?



g. Explain which side of the line should be shaded.

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

Need help? Check out these related videos:

<http://www.khanacademy.org/math/algebra/linear-equations-and-inequality/v/graphing-linear-inequalities-in-two-variables-2>

