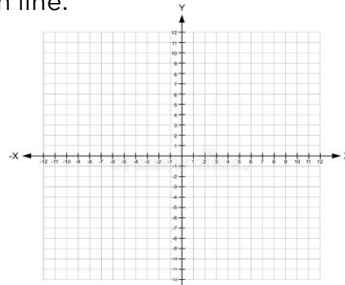


SC Algebra 1
6.5 Graphing Linear Inequalities – Guided Notes

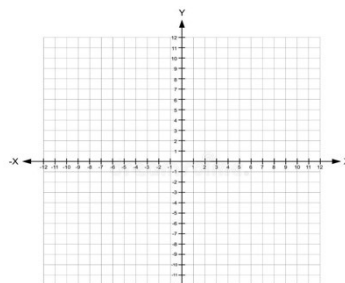
Warm Up:

Find the slope and y-intercept, then graph each line.

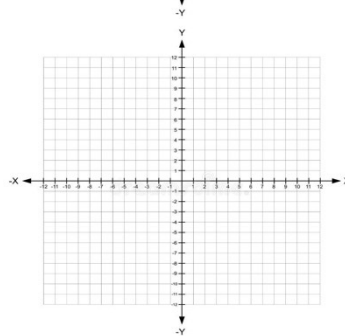
1. $y = \frac{1}{2}x + 3$



2. $f(x) = 3x - 2$



3. $3x - 5y = 10$



Speak Like A Mathematician

graph of a linear inequality: represents the _____ of all _____ that are _____ of the inequality.

boundary: the _____ of the graph of an _____ that separates the _____ plane into _____.

half plane: a _____ of a graph of an inequality on one side of a _____.

KEY CONCEPT:

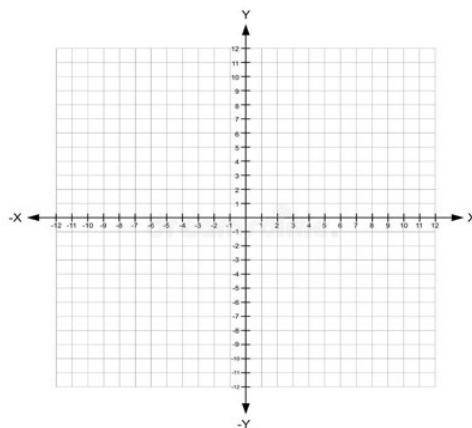
SC Algebra 1
6.5 Graphing Linear Inequalities – Guided Notes

$>$	On a Number Line
On a Coordinate Plane	
$<$	On a Number Line
On a Coordinate Plane	
$\geq$	On a Number Line
On a Coordinate Plane	
$\leq$	On a Number Line
On a Coordinate Plane	

Example 1: Graphing $>$ or $<$ Inequalities

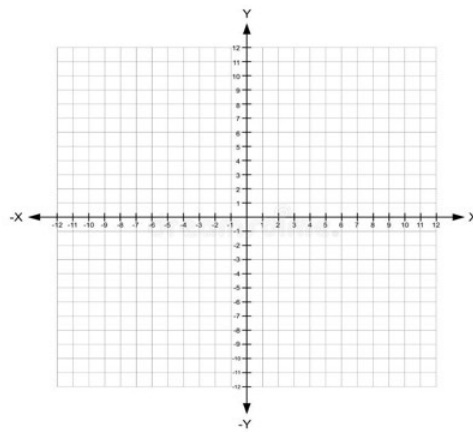
Graph the solution set.

a) $y < -\frac{2}{3}x + 1$

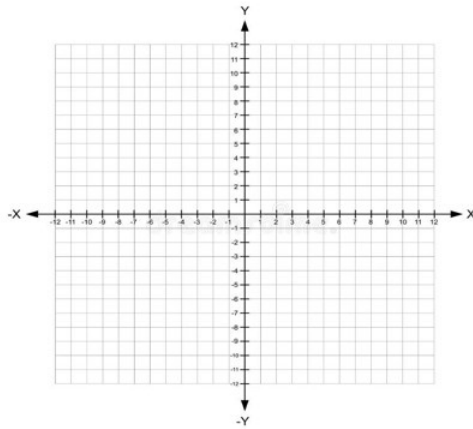


b) $3x - 2y < 8$

SC Algebra 1
6.5 Graphing Linear Inequalities – G



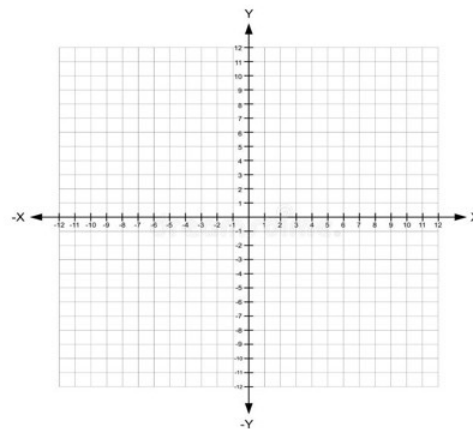
c) $2x - 7y > 14$



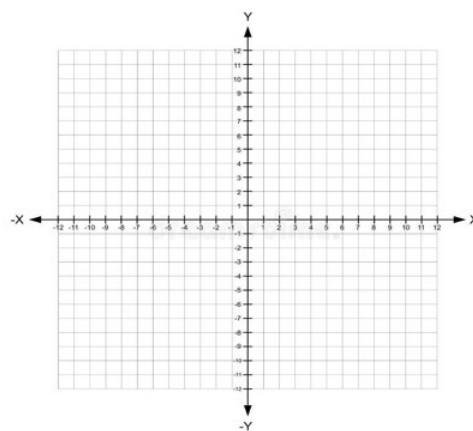
Example 1: Graphing $\geq$ or $\leq$ Inequalities

Graph the solution set.

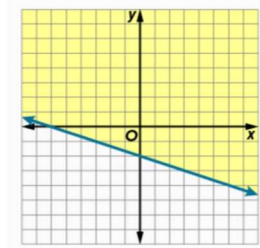
a) $y \geq -x + 4$



b) $3x + 4y \leq 0$



Check: Select the inequality that represents the graph.

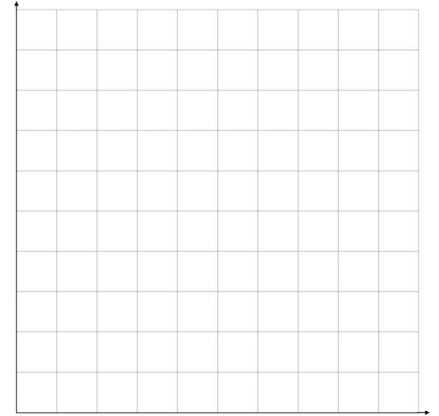


- ☐ A $-x + 3y < -6$
- ☐ B $-x + 3y > -6$
- ☐ C $-x + 3y \geq -6$
- ☐ D $x + 3y > -6$
- ☐ E $x + 3y \geq -6$
- ☐ F $x + 3y \leq -6$

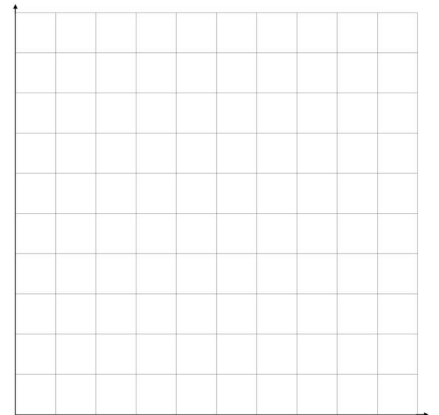
Example 3: Apply Graphing Linear Inequalities

Dominique can spend up to \$20 to provide the dance squad with drinks after their practice. A bottle of water costs \$0.80, and a sports drink costs \$1.25.

Write and graph an inequality that represents how many bottles of water and sports drinks Dominique can buy for the dance squad?



Veronica works at a flower shop that sells roses in large and small bouquets. Large bouquets have one dozen roses, while small bouquets have one-half dozen roses. There are currently 300 roses in the flower shop's inventory. Write and graph an inequality that represents the number of large and small bouquets Veronica can make.



Samir plans to buy a new gaming console which will cost \$450. He earns \$6 per hour babysitting and \$10 per hour tutoring. Let x be the number of hours babysitting and y be the number of hours tutoring. Write and graph an inequality that represents the number of hours Samir could work to buy the game system.

