

Homework 2.2 Modeling Linear Inequalities

Graph the following linear inequalities using a **number line** and **coordinate plane** representations.

1.  $y \leq -2$

2.  $x > 2$

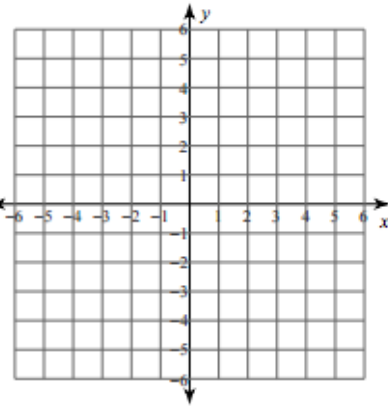
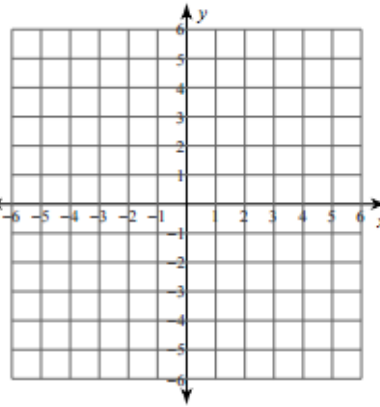
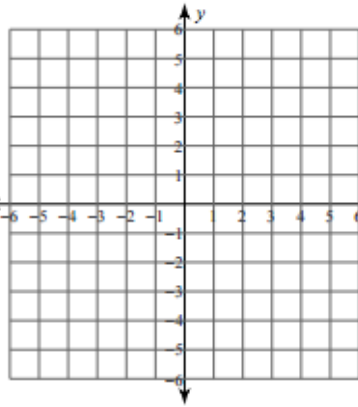
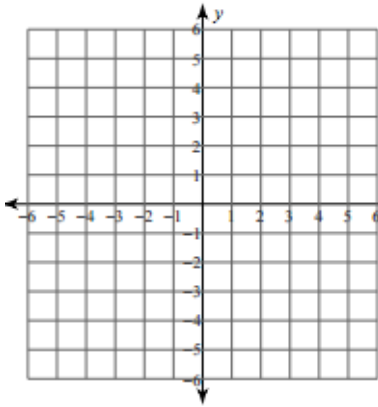
3.  $-2 \leq y$

4.  $5 > x$

[Number Line Representation]



[Coordinate Plane Representation]



Graph the following linear inequalities using a coordinate plane representation.

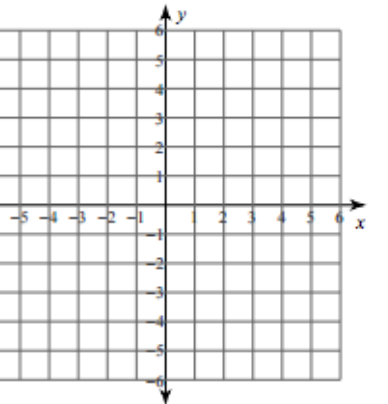
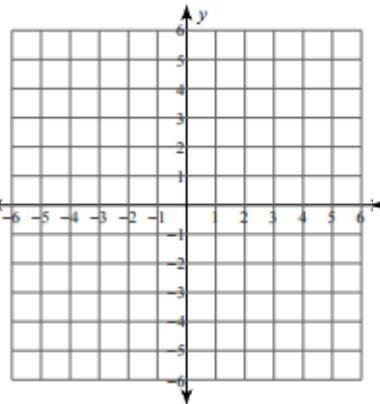
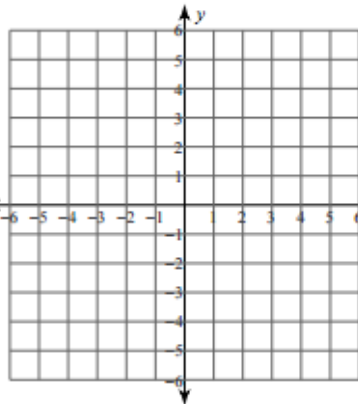
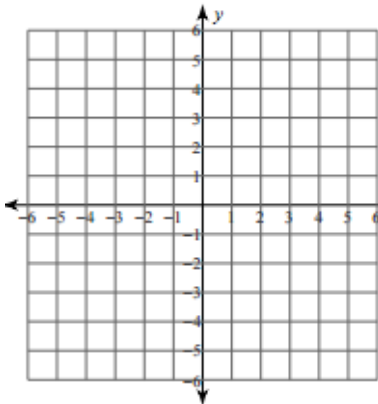
REMEMBER TO CHANGE INEQUALITY SIGN WHEN DIVIDE BY NEGATIVE NUMBER!

5.  $y < -3x - 6$   
20

6.  $3x - 5y \geq -5$

7.  $y > \frac{1}{4}x + 2$

8.  $6x - 5y \leq$

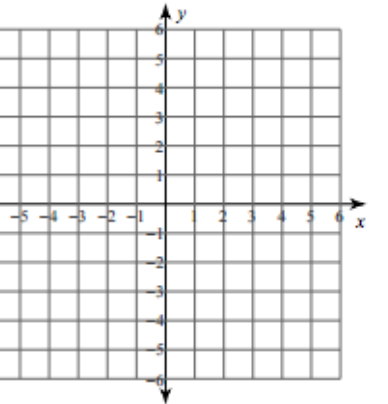
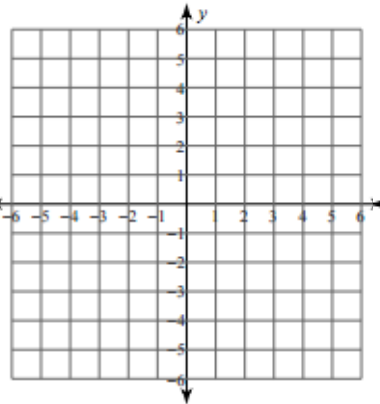
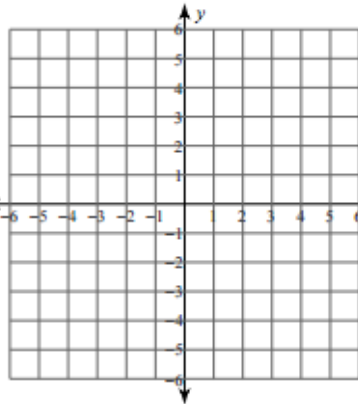
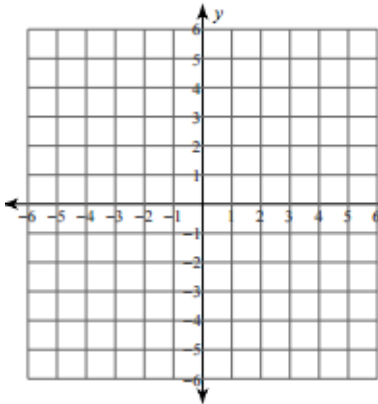


9.  $7x + y < 5$

10.  $x - y > 3$

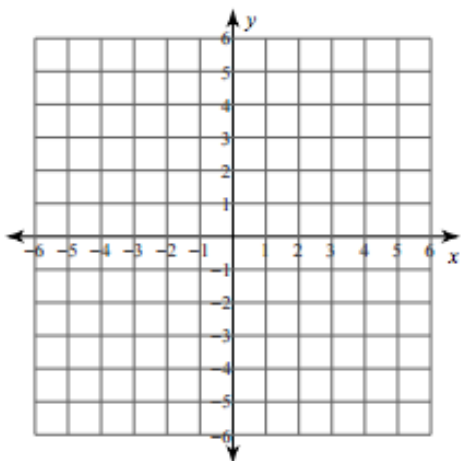
11.  $x + y \leq -1$

12.  $y \geq 3x - 5$



13.  $y < \frac{5}{3}x$

[Graphical Representation]



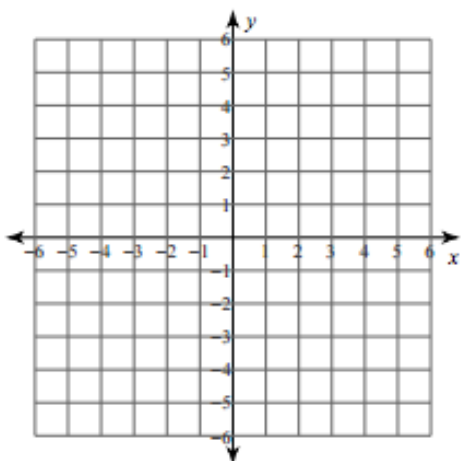
[Analytic Representation]

Some example points of solutions are:

[Verbal Representation]

14.  $y > -\frac{1}{3}x + 3$

[Graphical Representation]



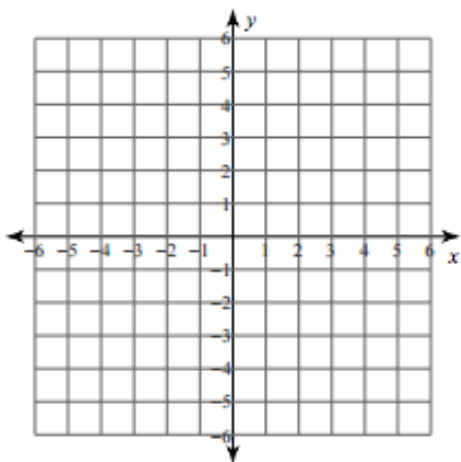
[Analytic Representation]

Some example points of solutions are:

[Verbal Representation]

15.  $y = \frac{1}{5}x - 4$

[Graphical Representation]



[Analytic Representation]

Some example points of solutions are:

[Verbal Representation]