

**Homework** 2.5 Solving Inequalities with Graphing

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

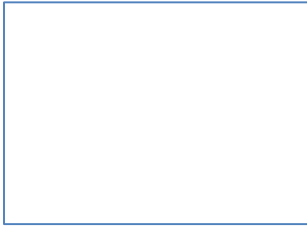
REMEMBER TO CHANGE INEQUALITY SIGN WHEN DIVIDE BY NEGATIVE NUMBER!

1.  $3x + 7 > 4x + 9$

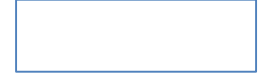
2.  $7y - 4 < 6 + 2y$

3.  $2x - 1 \leq 4 - \frac{1}{2}x$

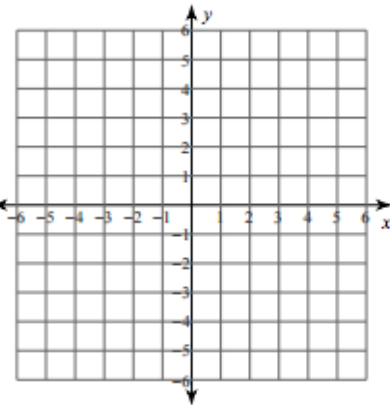
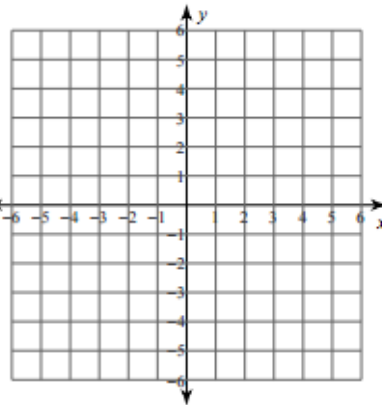
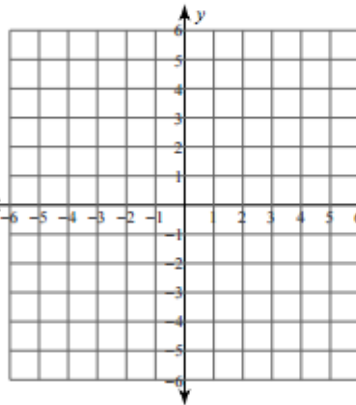
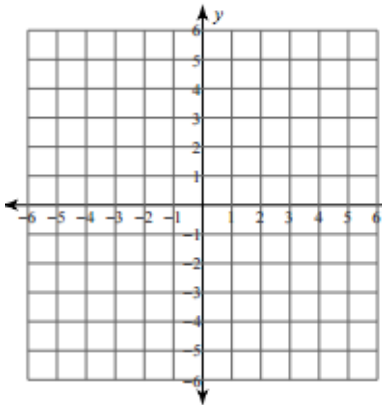
4.  $3y - 6 \geq 3(7 + 2y)$



[Number Line Representation]



[Coordinate Plane Representation]



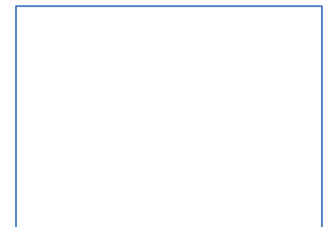
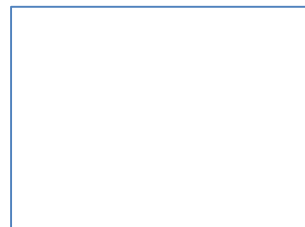
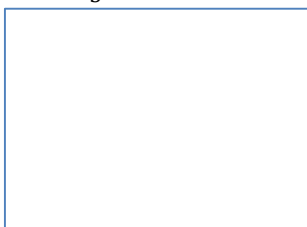
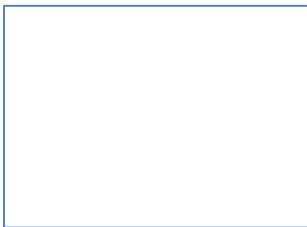
Solve each linear inequality. Graph the following linear inequalities using a **coordinate plane** representation.

5.  $2x + 3x < 4x + 1$

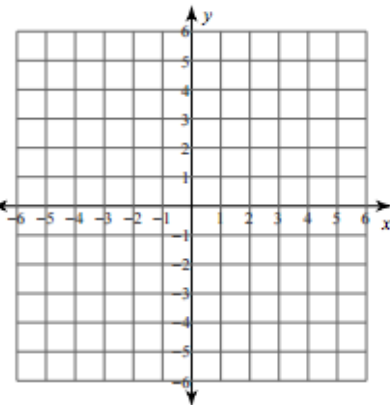
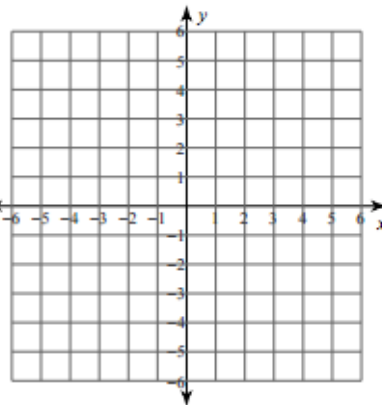
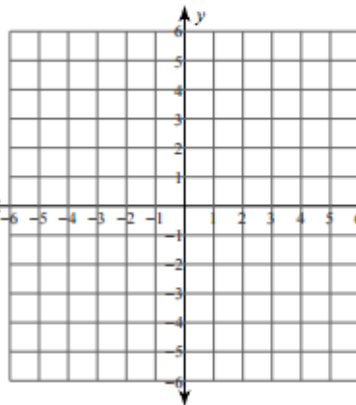
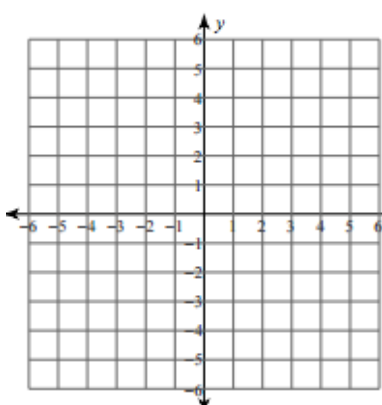
6.  $\frac{2y-3}{5} \leq 7$

7.  $7x - 1 > 26 - 2x$

8.  $-3x \geq 6$



[Coordinate Plane Representation]



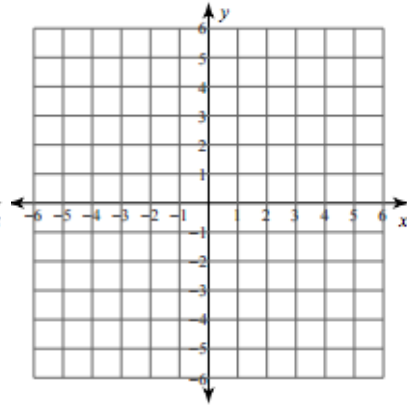
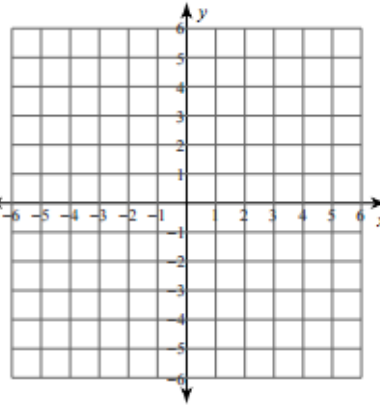
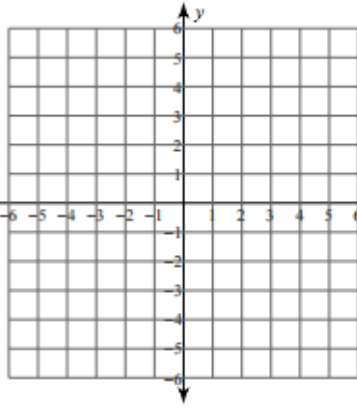
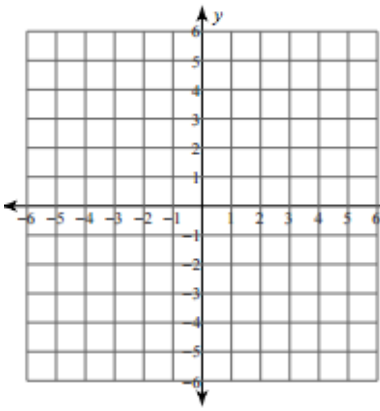
$$9. y > -x - 5$$

$$10. y \leq \frac{7}{4}x + 2$$

$$11. y < 2x - 5$$

$$12. y \geq \frac{4}{3}x - 4$$

[Coordinate Plane Representation]



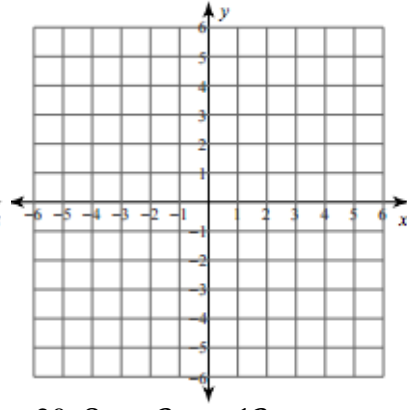
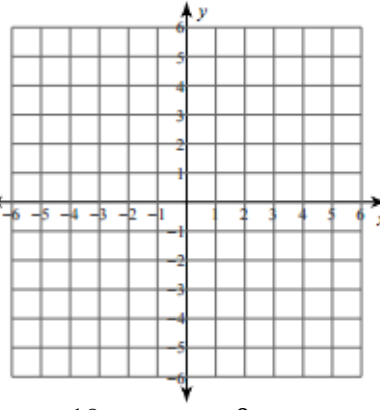
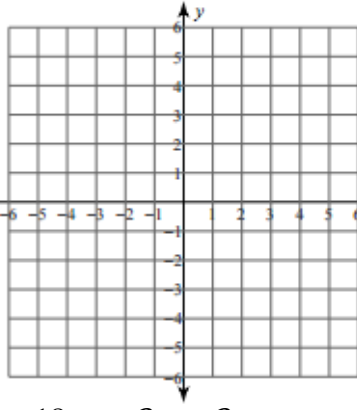
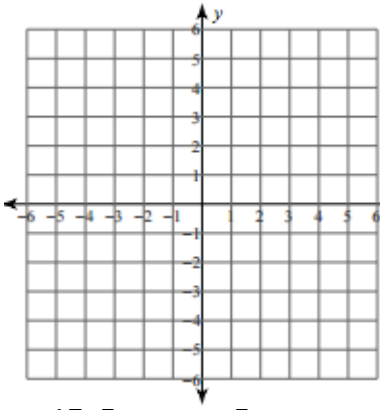
$$13. 3x - 2y \geq 10$$

$$14. 5x - 3y < -15$$

$$15. x - y < 2$$

$$16. y \leq -3x + 4$$

[Coordinate Plane Representation]



$$17. 5x - y < 5$$

$$18. x + 3y \geq 3$$

$$19. x - y \leq 0$$

$$20. 8x - 3y \leq 12$$

[Coordinate Plane Representation]

