**Graphing Linear Inequalities**

Important Information:

* When solving the inequality remember if you \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ or \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ by a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ you change the direction of the sign (inequality).
* If the inequality is < or > then the line of the inequality is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and if the inequality is ≤ or ≥ then the line of the inequality is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
* If the ordered pair (point) not on the line is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ you shade that side.

Example: 5x – 2y < 14

Step 1: Solve the inequality for y (slope intercept form).

5x – 2y < 14 (Subtract 5x from both sides of the inequality)

-2y < -5x + 14 (Divide both sides by -2 [Remember to change sign direction.])

y > 5/2 x – 7

Step 2: Graph the line of the inequality. (The line is dashed since the inequality is >)

Step 3: Test a point that is not on the line. If it is true shade the side of the line where the point is. If it is false shade the opposite side.