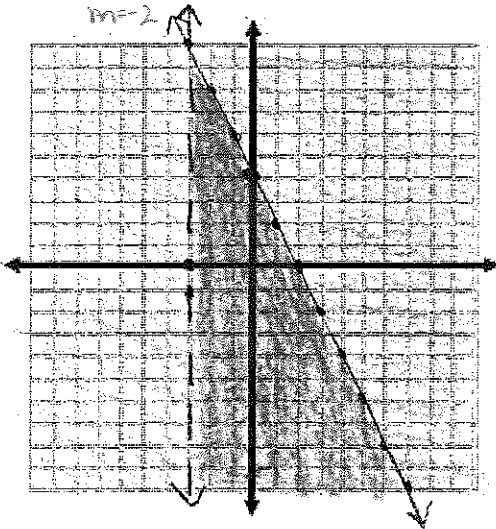


Systems of Inequalities Notes

Solving a System by Graphing

Example 1

a) $y \leq -2x + 4$
 $x > -3$



$<, >$ -----

\leq, \geq -----

Test Points:

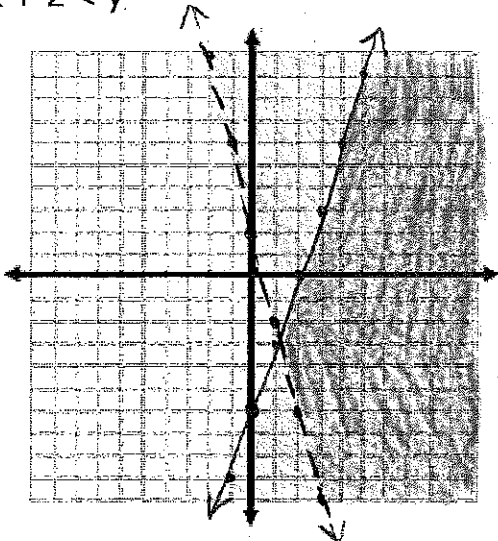
$(-4, -3)$ - NO

$(0, -5)$ - YES

$(-3, 4)$ - NO

$(2, 0)$ - YES

b) $y \leq 3x - 6$
 $-4x + 2 < y$



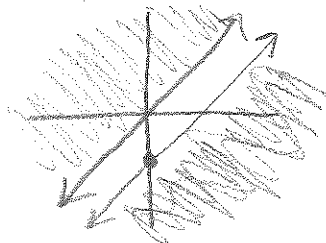
Rewrite:

$y > -4x + 2$

What is the solution to a system of two inequalities whose shaded regions do not overlap? NO SOLUTION

$y \geq x$

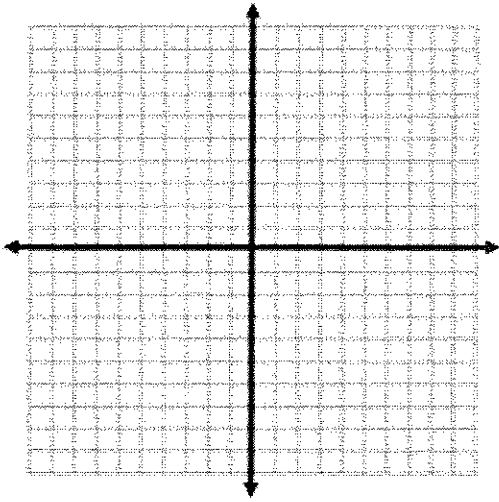
$y \leq x - 1$



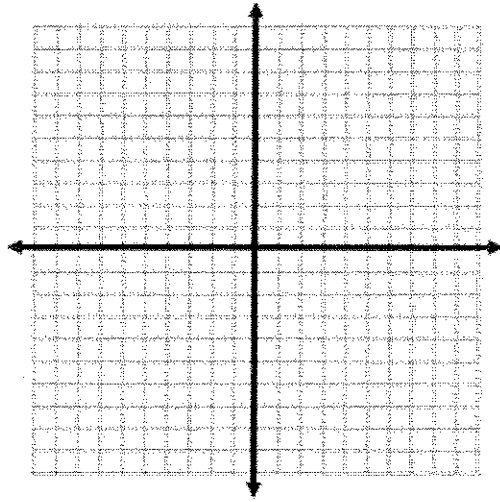
Systems of Linear Inequalities Practice

Name _____

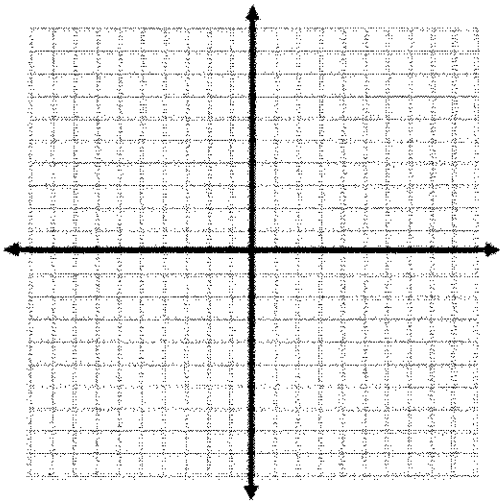
1. $x < 3$
 $y \geq -4$



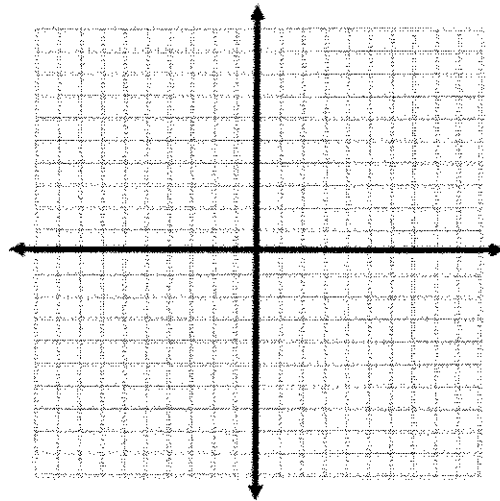
2. $y > 3x - 5$
 $y \leq 4$



3. $y < -3x + 4$
 $3y + x > -6$



4. $6x - 2y \geq 12$
 $3x + 4y > 12$



Solve each system of equations.

5. $8r - 5t = -60$
 $6r + 3t = -18$

6. $10t + 4v = 13$
 $-4t - 7v = 11$

7. $\frac{3}{2}y + z = 3$
 $-y - \frac{2}{3}z = -2$

8. $11p + 3q = 6$
 $-0.75q - 2.75p = -1.5$

Solve each inequality. Graph the solution set on a number line.

9. $\frac{|5f-2|}{6} > 4$

10. $6|4p + 2| - 8 < 34$