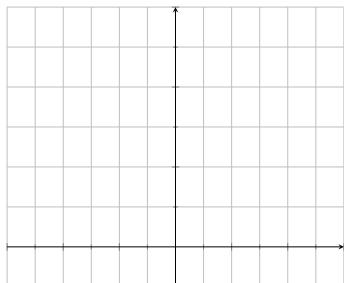**MAT 171 Homework Section 8.5: Systems of Inequalities**
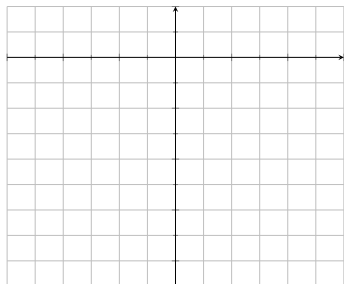
Name: _____

In 1-7, graph each inequality. In 8-12, graph the solution set of each system of inequalities or indicate that the system has no solution.
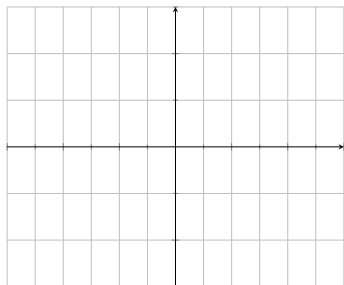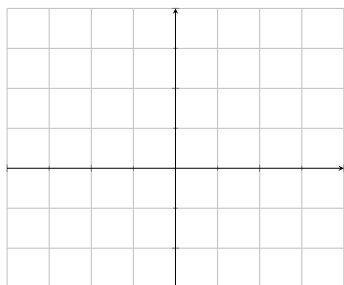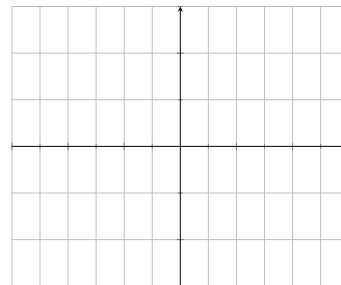
1) $x + 2y \leq 8$
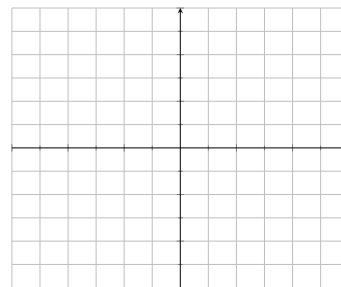
2) $x - 2y > 10$

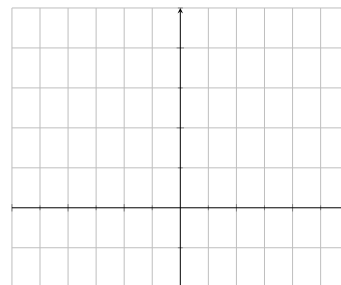3) $y \leq \frac{1}{3}x$

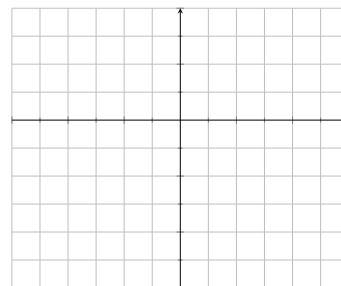4) $y > 2x - 1$

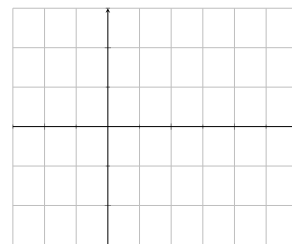5) $x \leq 1$

6) $x^2 + y^2 > 25$

7) $y < x^2 - 1$

8)

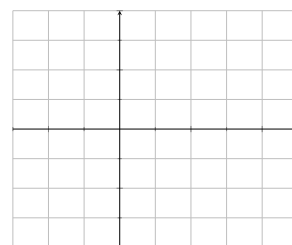$$\begin{cases} 2x - 5y \leq 10 \\ 3x - 2y > 6 \end{cases}$$

9) $-2 \le x < 5$
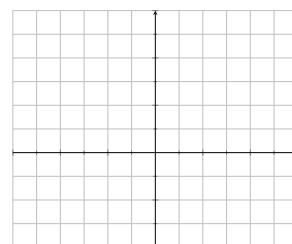
10)
$$\begin{cases} x - y \le 1 \\ x \ge 2 \end{cases}$$

11)
$$\begin{cases} x + y > 4 \\ x + y > -1 \end{cases}$$

12)
$$\begin{cases} x - y \le 2 \\ x > -2 \\ y \le 3 \end{cases}$$