Homework 3.7: Graphing Systems of Inequalities

Directions: Match the system of inequalities to the correct graph.

A)

B)

C)

D)

E)

F)

G)

H)
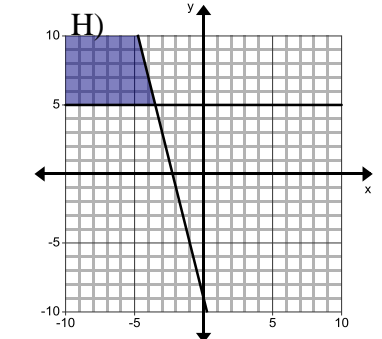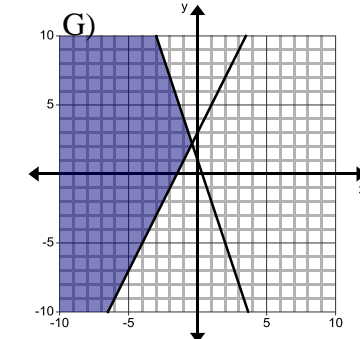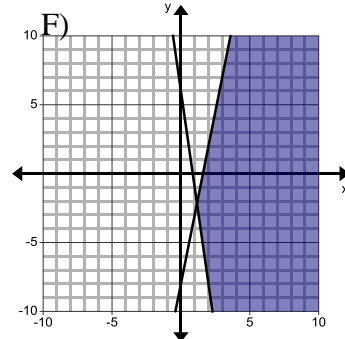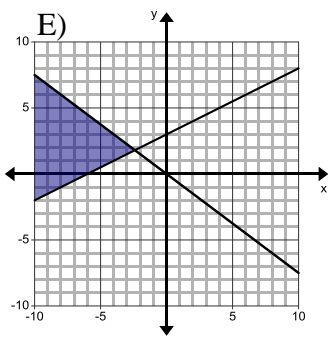
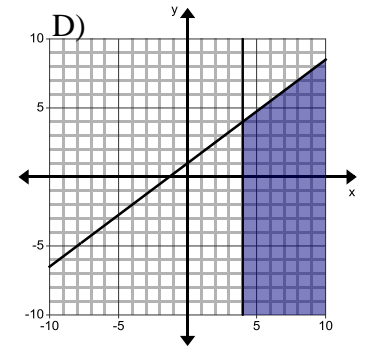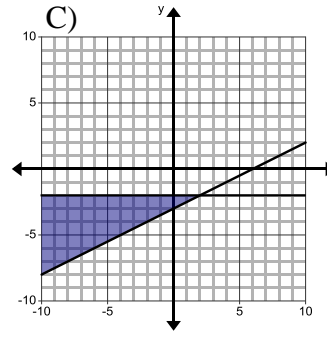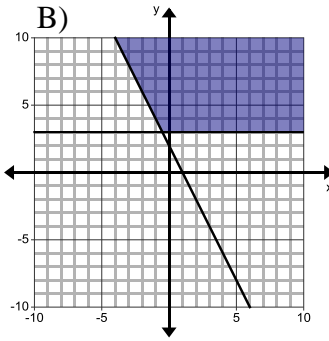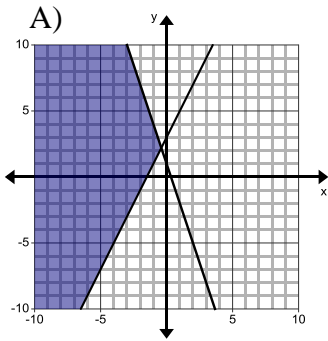| Equations	Answer
1) $x \geq 4$ $y < \dfrac{3}{4}x + 1$	_____
2) $y \geq 2x + 3$ $y < -3x + 1$	_____
3) $y > 3$ $y > -2x + 2$	_____
4) $y \leq 5x - 8$ $y > -7x + 6$	_____

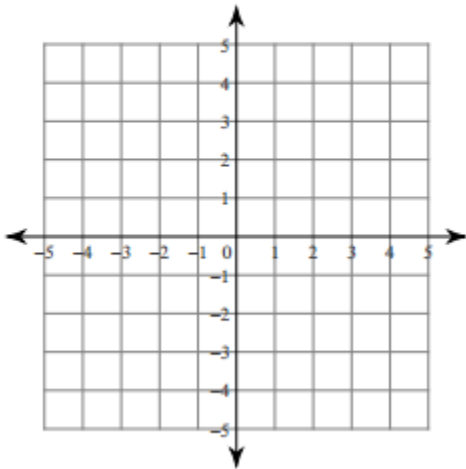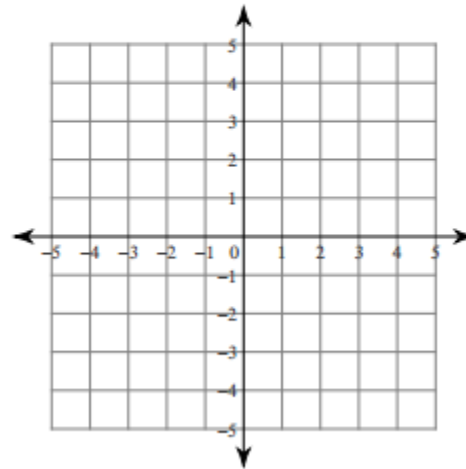| Equations	Answer
5) $y > 2x + 3$ $y \leq -3x + 1$	_____
6) $y < -2$ $y \geq \dfrac{1}{2}x - 3$	_____
7) $y \geq 5$ $y < -4x - 9$	_____
8) $y \geq \dfrac{1}{2}x + 3$ $y \leq -\dfrac{3}{4}x$	_____

9. Which scenario can be modeled by the graph below?
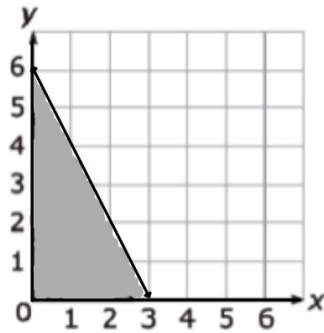
A. The number of pounds of coffee, y, minus two times the number of pounds of tea, y, is at most 6.

B. The number of pounds of coffee, y, minus half the number of pounds of tea, x, is at most 6.

C. The number of pounds of coffee, y, plus two times the number of pounds of tea, x , is at most 6.

D. The number of pounds of coffee, y, plus half the number of pounds of tea, x, is at most 6.
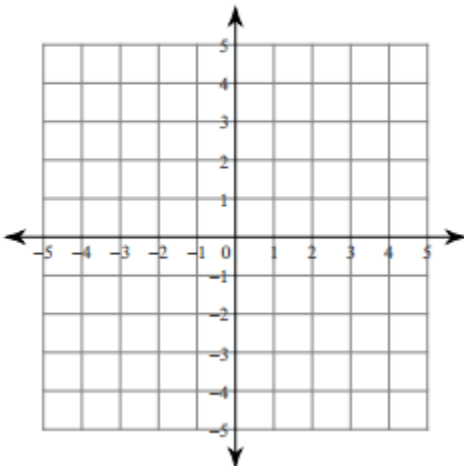
Sketch the solution to each system of inequalities.

1) $y > 4x - 3$
   $y \ge -2x + 3$

2) $y \ge -5x + 3$
   $y > -2$

11) $3x + y \ge -3$
    $x + 2y \le 4$

12) $x + y \ge -3$
    $x + y \le 3$