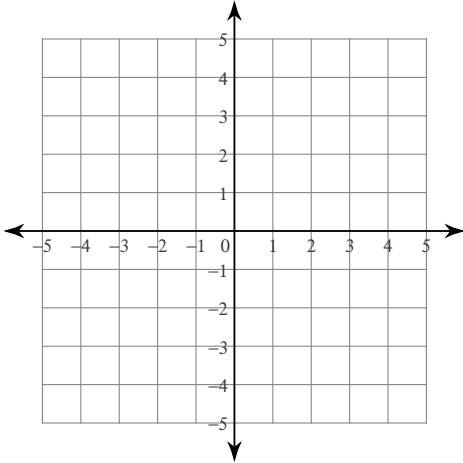


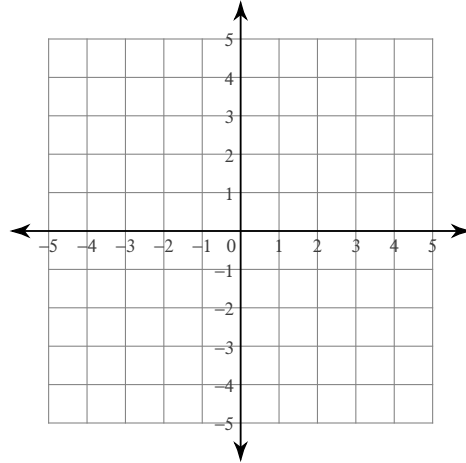
## Systems of Inequalities

**Sketch the solution to each system of inequalities.**

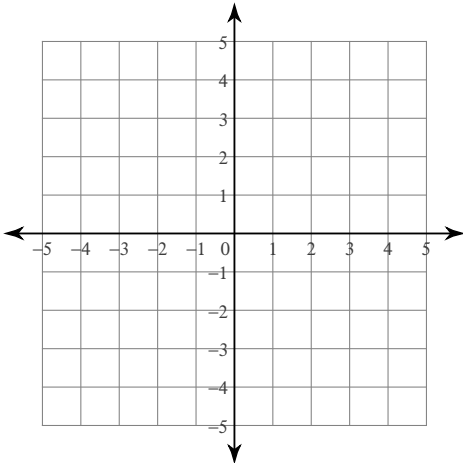
1)  $y > 4x - 3$   
 $y \geq -2x + 3$



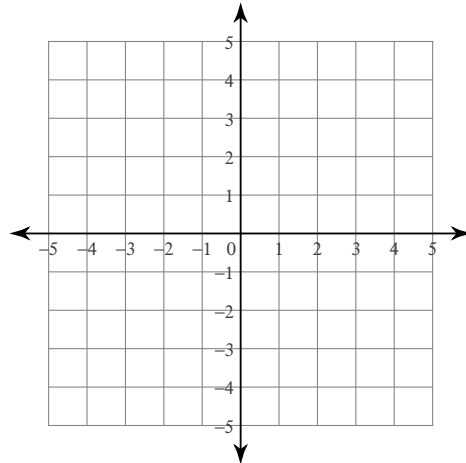
2)  $y \geq -5x + 3$   
 $y > -2$



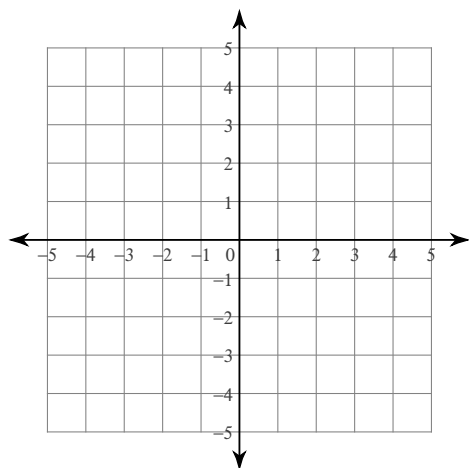
3)  $y < 3$   
 $y \leq -x + 1$



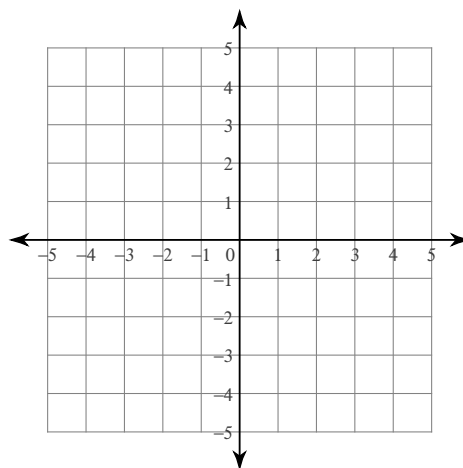
4)  $y \geq x - 3$   
 $y \geq -x - 1$



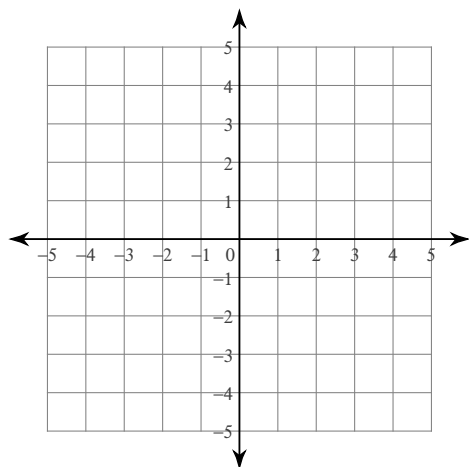
5)  $x \leq -3$   
 $5x + 3y \geq -9$



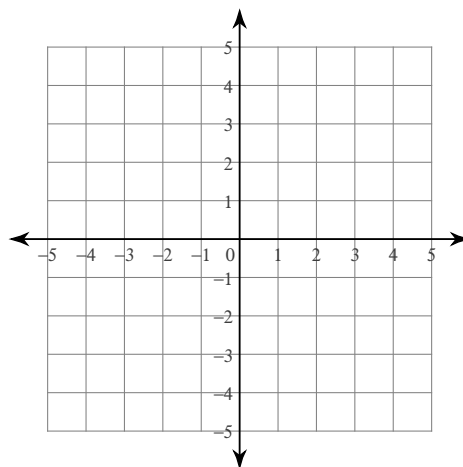
6)  $4x - 3y < 9$   
 $x + 3y > 6$



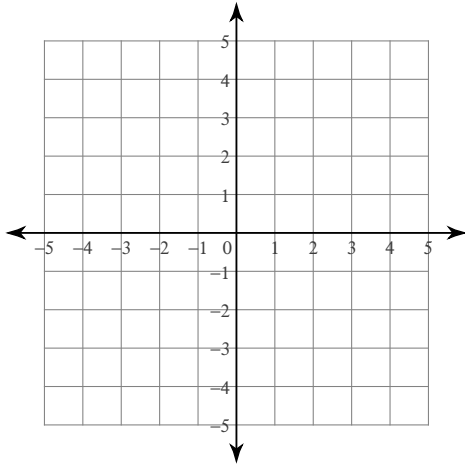
7)  $x + y > 2$   
 $2x - y > 1$



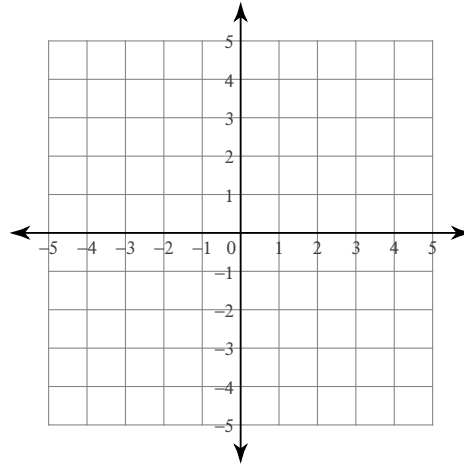
8)  $x + y \geq 2$   
 $4x + y \geq -1$



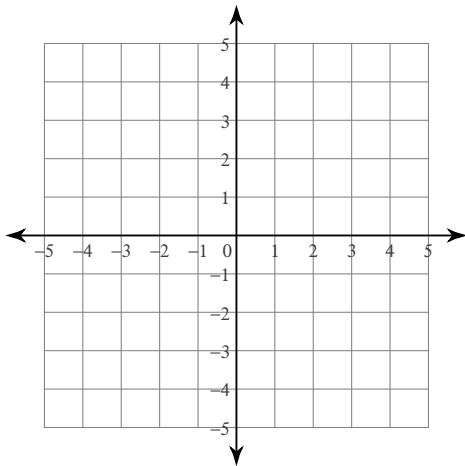
9)  $4x + 3y > -6$   
 $x - 3y \leq -9$



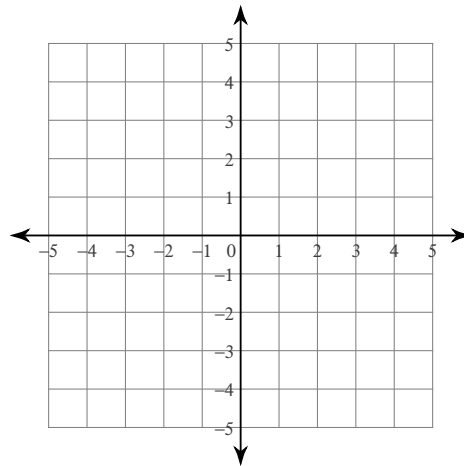
10)  $y < -2$   
 $x + y \geq 1$



11)  $3x + y \geq -3$   
 $x + 2y \leq 4$



12)  $x + y \geq -3$   
 $x + y \leq 3$



**Critical thinking questions:**

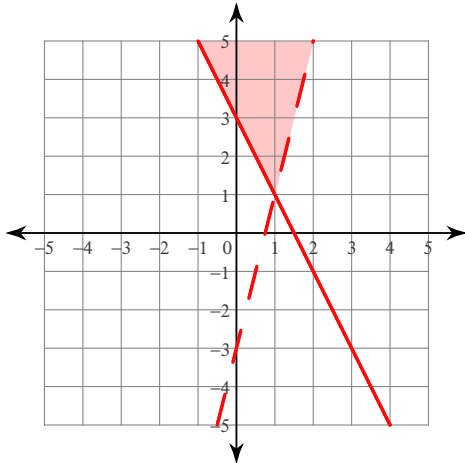
13) State one solution to the system  
 $y < 2x - 1$   
 $y \geq 10 - x$

14) Write a system of inequalities whose solution is the set of all points in quadrant I not including the axes.

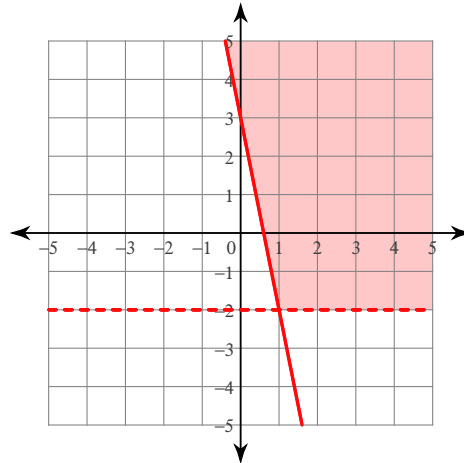
# Systems of Inequalities

Sketch the solution to each system of inequalities.

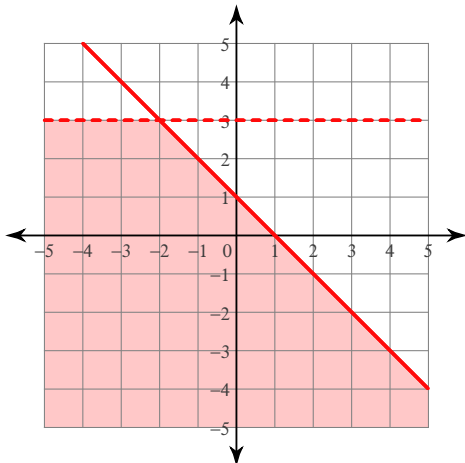
1)  $y > 4x - 3$   
 $y \geq -2x + 3$



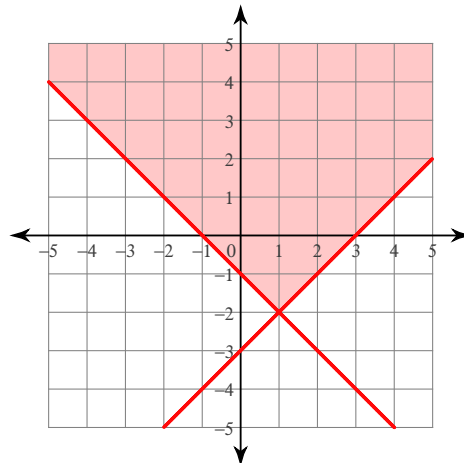
2)  $y \geq -5x + 3$   
 $y > -2$



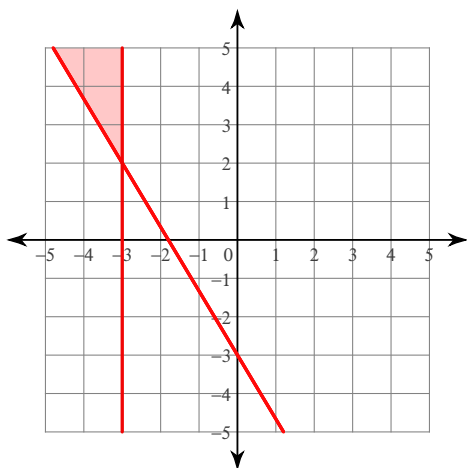
3)  $y < 3$   
 $y \leq -x + 1$



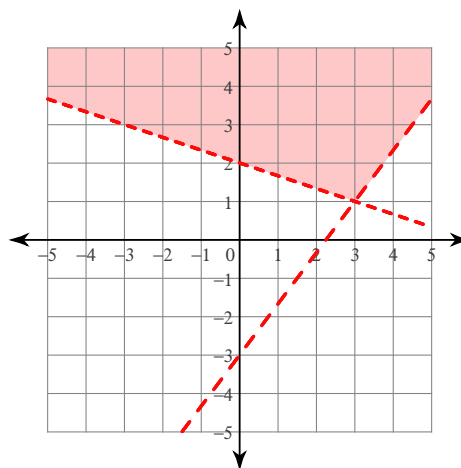
4)  $y \geq x - 3$   
 $y \geq -x - 1$



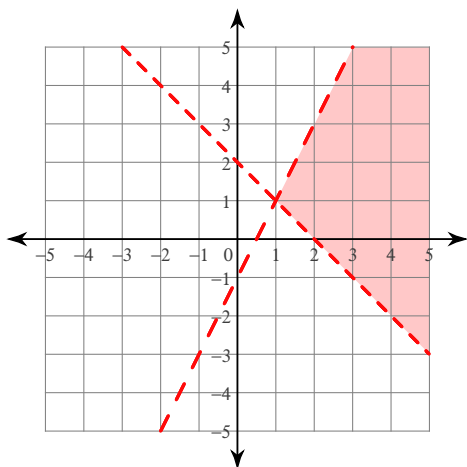
5)  $x \leq -3$   
 $5x + 3y \geq -9$



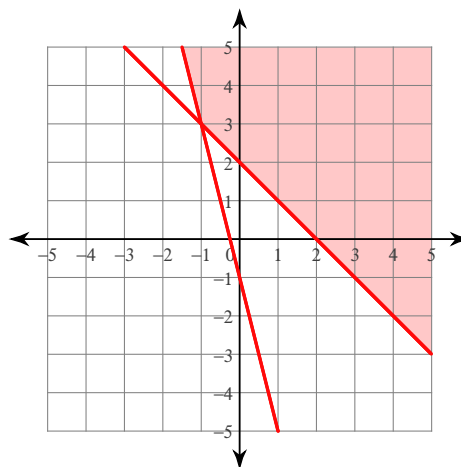
6)  $4x - 3y < 9$   
 $x + 3y > 6$



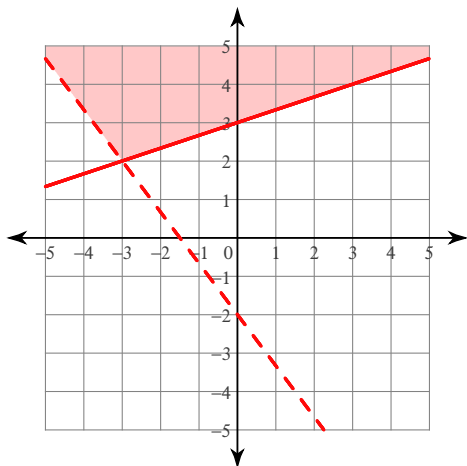
7)  $x + y > 2$   
 $2x - y > 1$



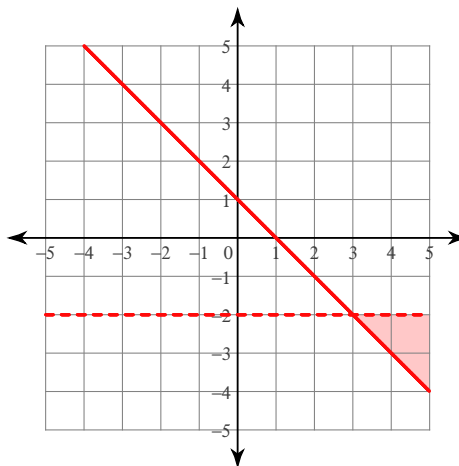
8)  $x + y \geq 2$   
 $4x + y \geq -1$



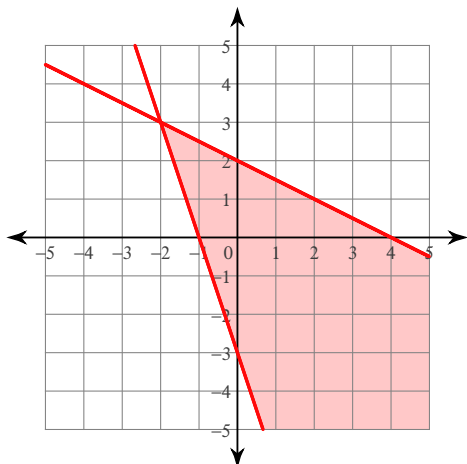
9)  $4x + 3y > -6$   
 $x - 3y \leq -9$



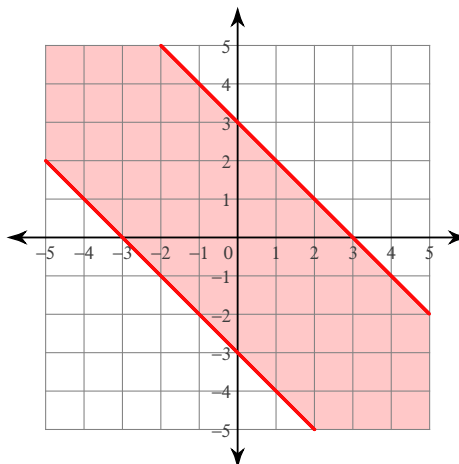
10)  $y < -2$   
 $x + y \geq 1$



11)  $3x + y \geq -3$   
 $x + 2y \leq 4$



12)  $x + y \geq -3$   
 $x + y \leq 3$



**Critical thinking questions:**

13) State one solution to the system  
 $y < 2x - 1$   
 $y \geq 10 - x$

Many solutions. Ex: (10, 10) or (5, 8)

14) Write a system of inequalities whose solution is the set of all points in quadrant I not including the axes.

$x > 0, y > 0$