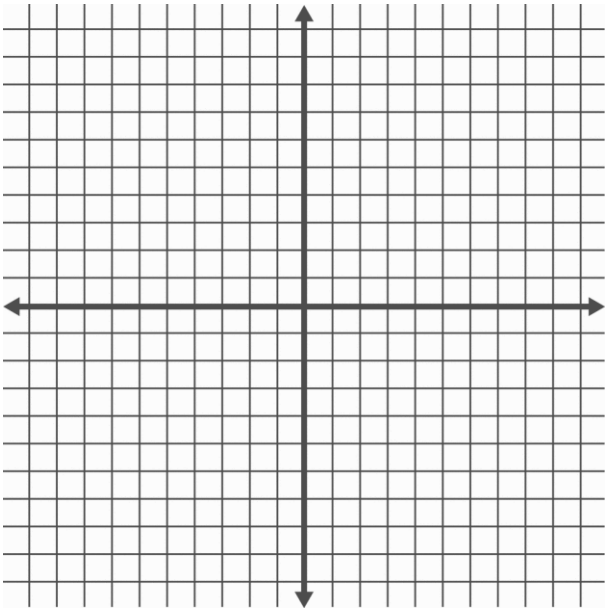
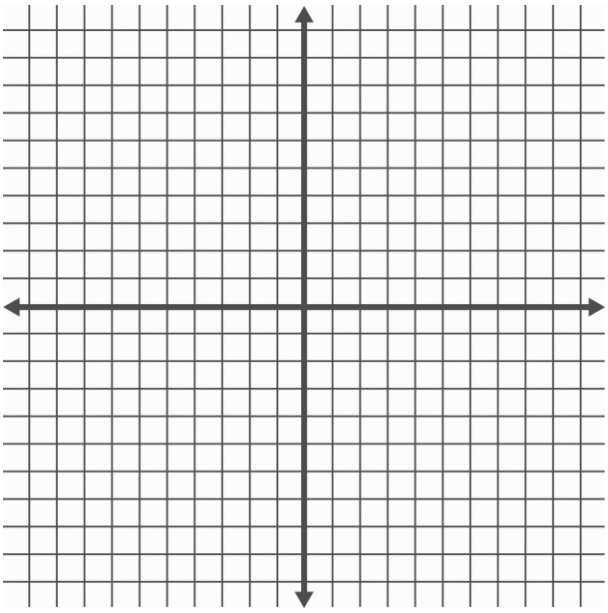
Unit 13.3 Systems of Linear Inequalities

1. Solve each of the systems of linear inequalities graphically

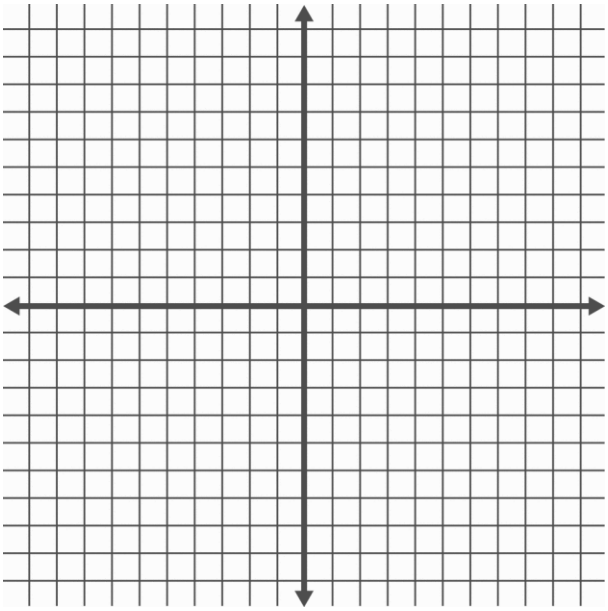
   a. $y > 2$
      $x \geq 3$



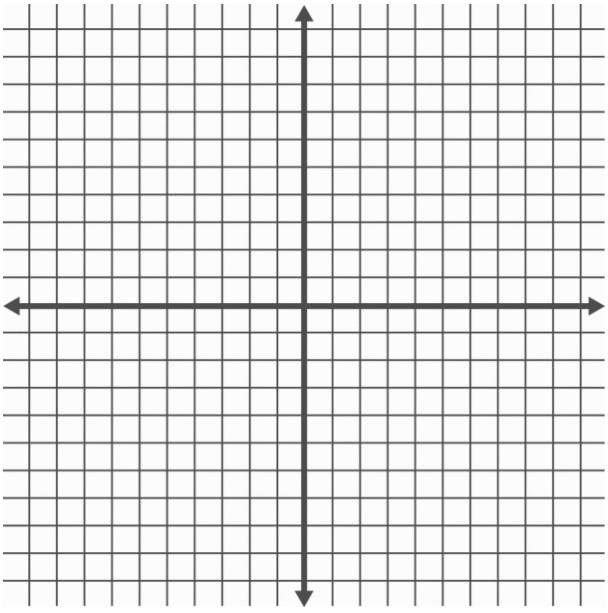
   b. $x - 3y \leq 3$
      $x < 5$



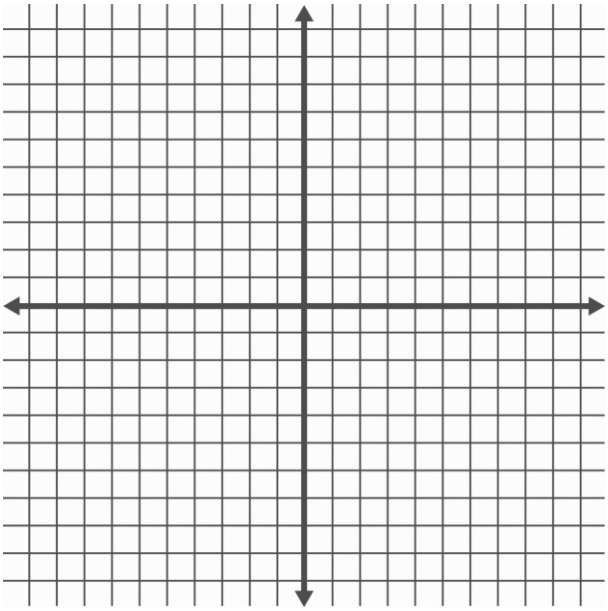
c. $3x + 4y \geq -7$
$y \geq 2x + 1$



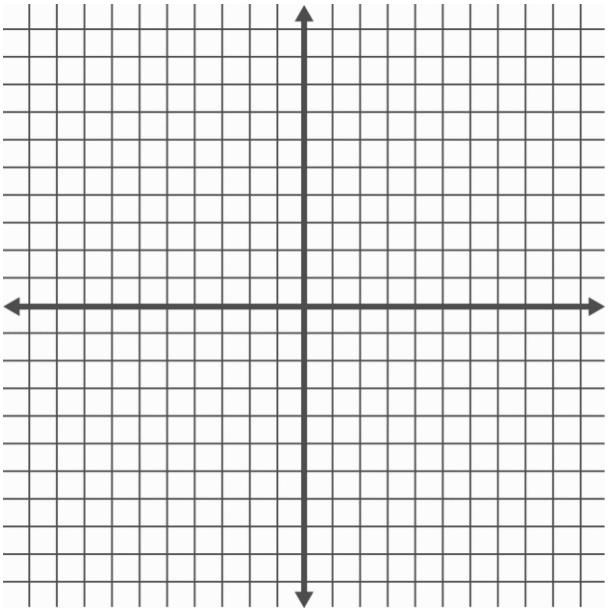
d. $x + 3y \leq 9$
$x - y \geq 5$



e. $y \leq x + 3$
$x - y \leq -5$



f. $y \leq -2x$
$y < -2x - 6$



2. Greg will donate up to $500 to charity. The money will be divided between two charities: the Animal Shelter and the Food Bank. Greg would like the amount donated to the Animal Shelter to be at least three times the amount donated to the Food Bank. Let x denote the amount of money (in dollars) donated to the Animal shelter. Let y denote the amount of money (in dollars) donated to the Food Bank. Write the equations and then shade the region corresponding to all values of x and y that satisfy these requirements (let each notch on the graph represent 100, 1 = 100)

_____ (eq.1) _____ (eq.2)