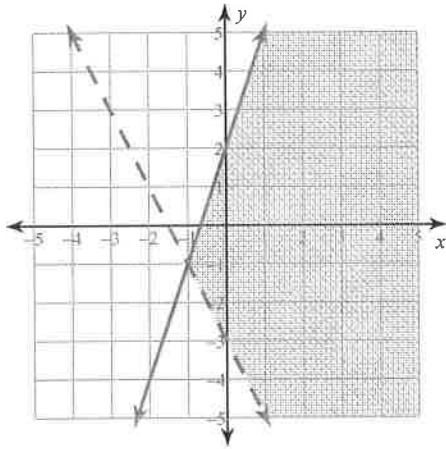


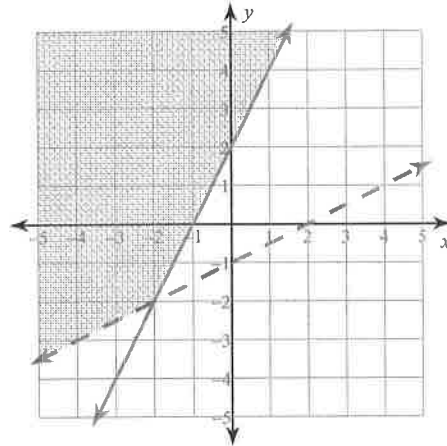
Systems of Linear Inequalities WS

Sketch the solution to each system of inequalities.

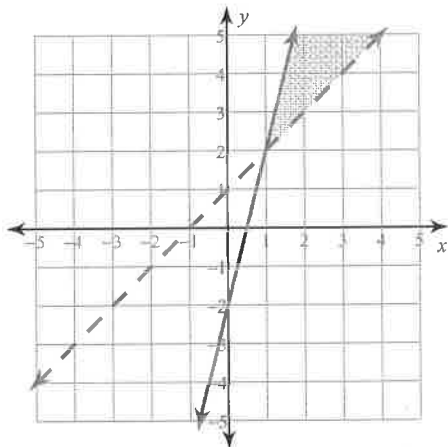
1) $y > -2x - 3$
 $y \leq 3x + 2$



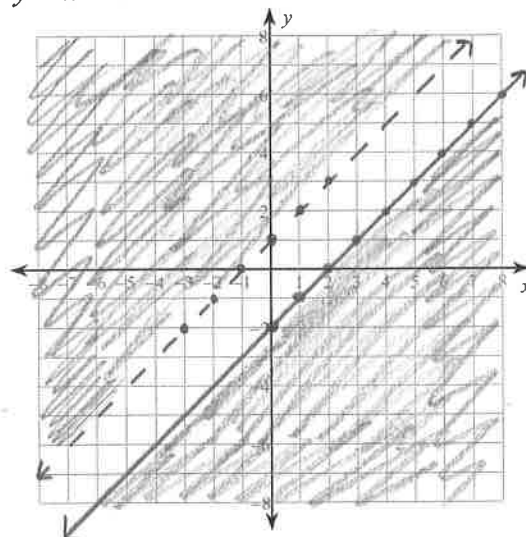
2) $x - 2y < 2$
 $2x - y \leq -2$



3) $4x - y \geq 2$
 $x - y < -1$

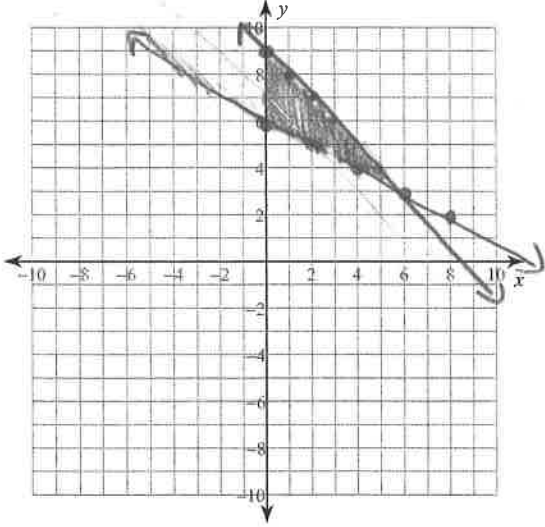


4) $y \leq x - 2$
 $y > x + 1$



The dot next to the choice indicates that it is the answer.

- 5) John is selling black and gold t-shirts for the RP football game. Gold t-shirts are selling for \$4 and black t-shirts are selling for \$8. John needs to make at least \$48. He would like to sell no more than 9 shirts. Write and graph a system of linear inequalities to represent the range of solutions.



X - Gold Y - Black

$$4x + 8y \geq 48$$

$$\begin{array}{r} -4x \\ \hline \end{array}$$

$$\frac{8y}{8} \geq \frac{-4x + 48}{8}$$

$$y \geq -\frac{1}{2}x + 6$$

$$x + y \leq 9$$

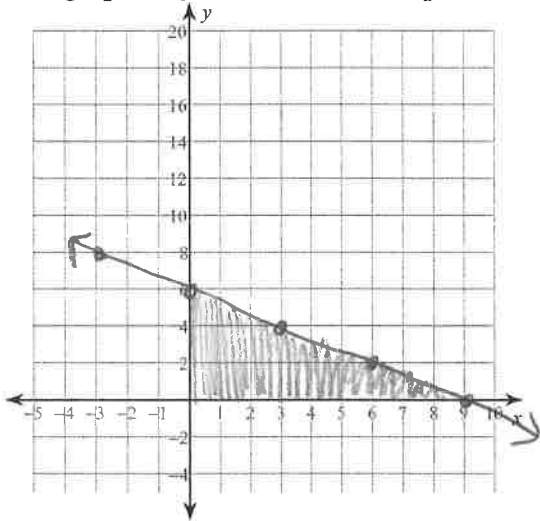
$$\begin{array}{r} -x \quad -x \\ \hline \end{array}$$

$$y \leq -x + 9$$

$$x \geq 0$$

$$y \geq 0$$

- 6) Fuel x costs \$2 per gallon and fuel y costs \$3 per gallon. You have at most \$18 to spend on fuel. Write and graph a system of linear inequalities to represent this situation.



$$2x + 3y \leq 18$$

$$\begin{array}{r} -2x \quad -2x \\ \hline \end{array}$$

$$\frac{3y}{3} \leq \frac{-2x + 18}{3}$$

$$y \leq -\frac{2}{3}x + 6$$

$$x \geq 0$$

$$y \geq 0$$