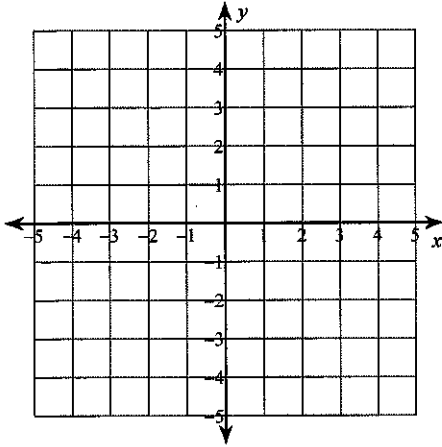


Solving Systems of Inequalities

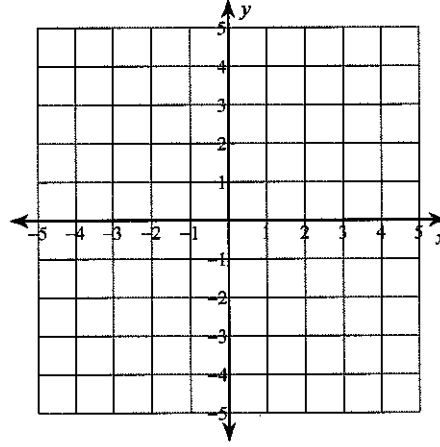
Packet 3

Sketch the solution to each system of inequalities.

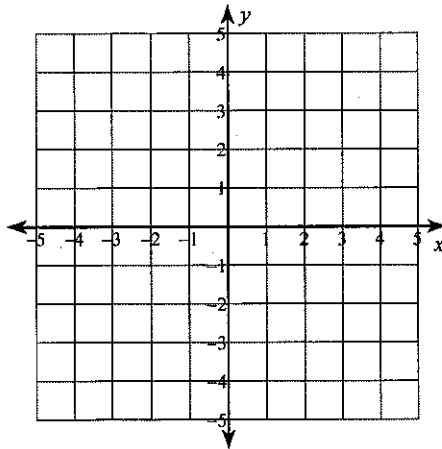
$$1) \begin{cases} y \leq -x - 2 \\ y \geq -5x + 2 \end{cases}$$



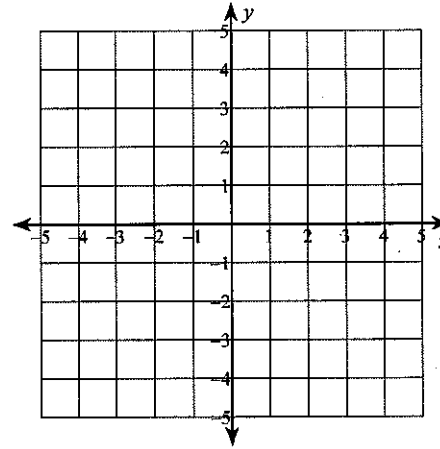
$$2) \begin{cases} y > -x - 2 \\ y < -5x + 2 \end{cases}$$



$$3) \begin{cases} y \leq \frac{1}{2}x + 2 \\ y < -2x - 3 \end{cases}$$



$$4) \begin{cases} x \leq -3 \\ y < \frac{5}{3}x + 2 \end{cases}$$



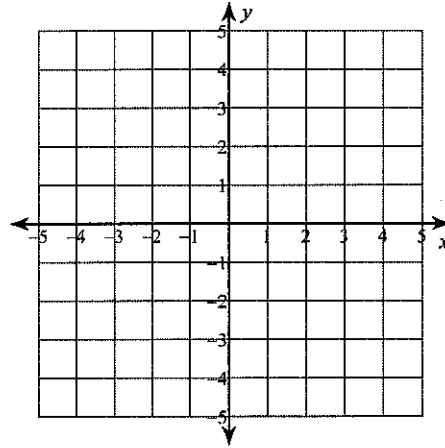
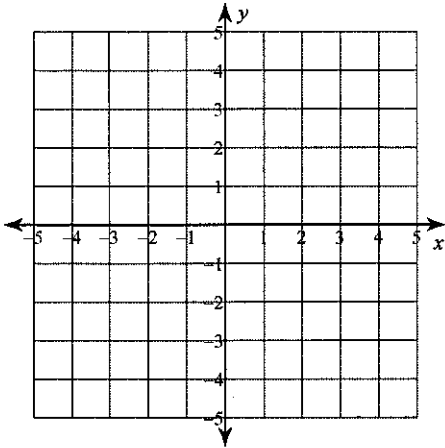
5) $y \leq -\frac{5}{2}x - 2$

$y < -\frac{1}{2}x + 2$

Packet 3

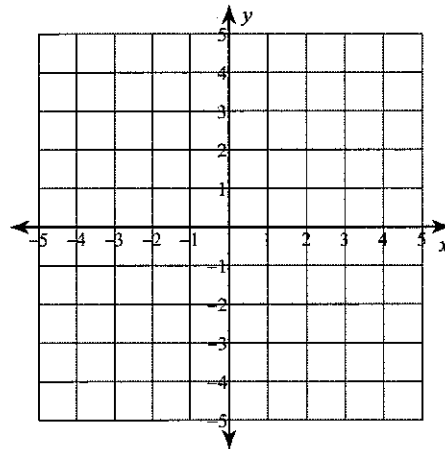
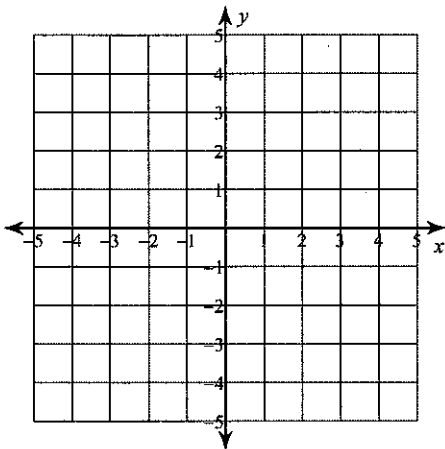
6) $y \geq \frac{2}{3}x + 3$

$y > -\frac{4}{3}x - 3$



7) $4x + y < 2$
 $y > -2$

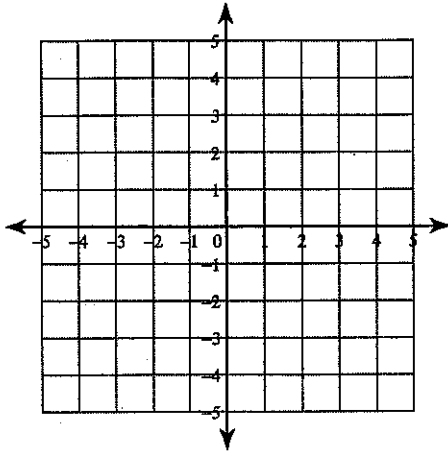
8) $3x + 2y \geq -2$
 $x + 2y \leq 2$



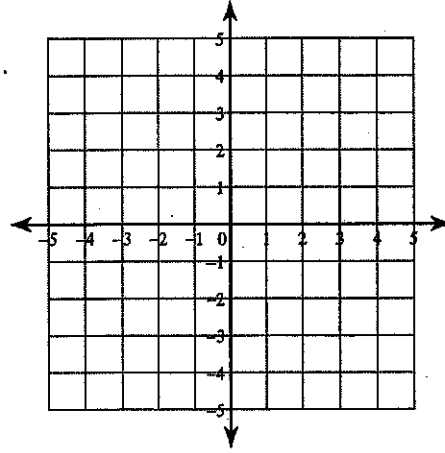
Systems of Inequalities

Sketch the solution to each system of inequalities.

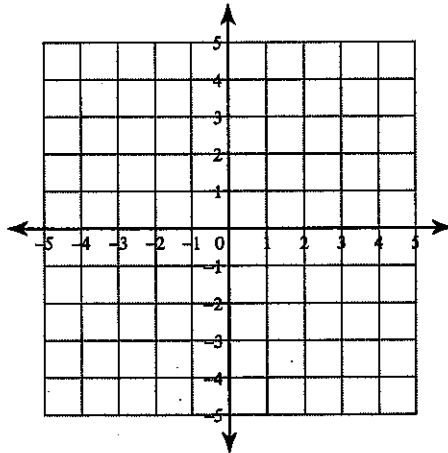
1) $y > 4x - 3$
 $y \geq -2x + 3$



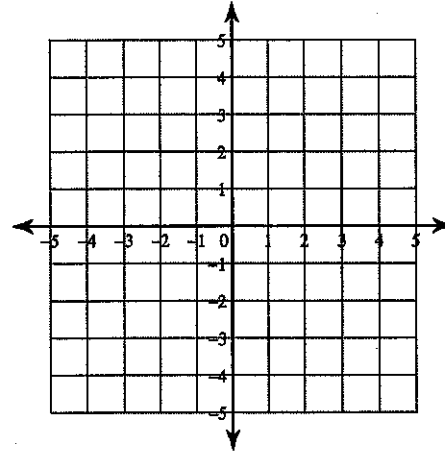
2) $y \geq -5x + 3$
 $y > -2$



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

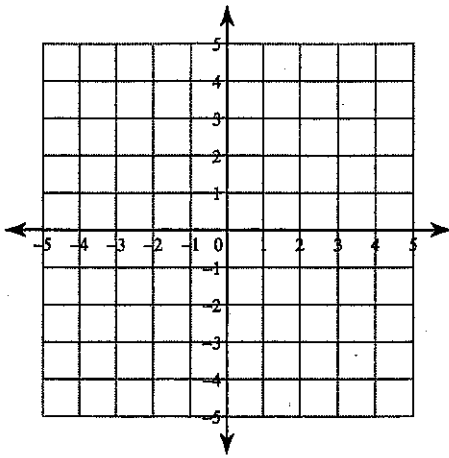


4) $y \geq x - 3$
 $y \geq -x - 1$

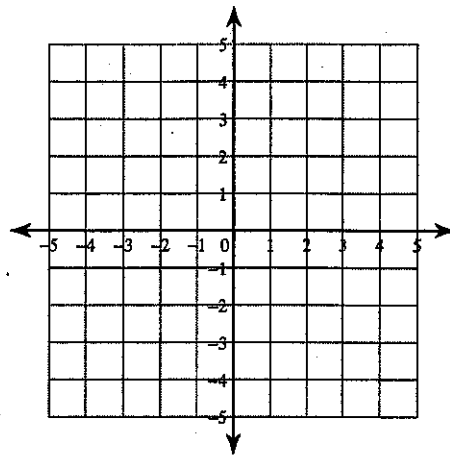


5) $x \leq -3$
 $5x + 3y \geq -9$

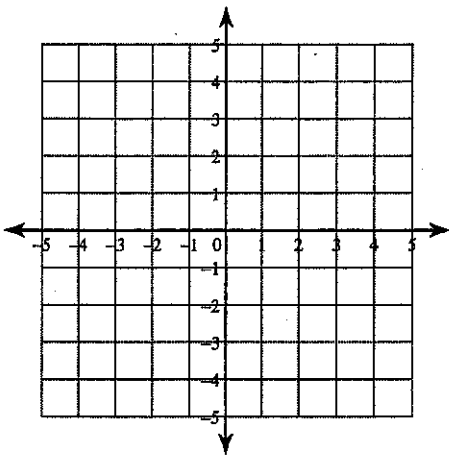
packet
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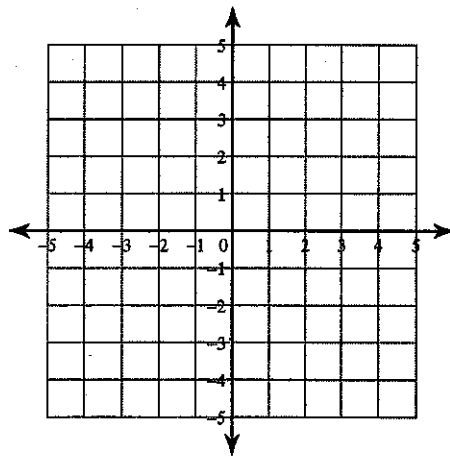
6) $4x - 3y < 9$
 $x + 3y > 6$



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

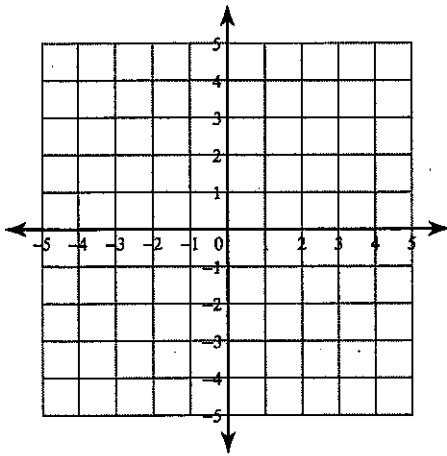


8) $x + y \geq 2$
 $4x + y \geq -1$

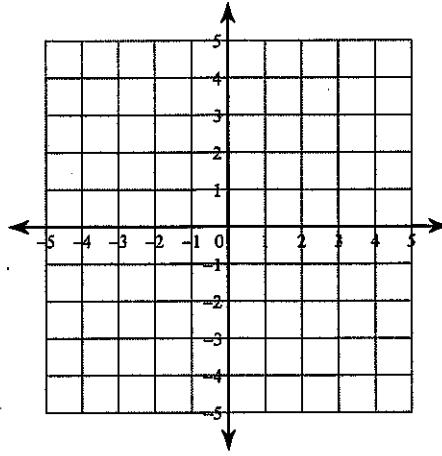


Packet 3

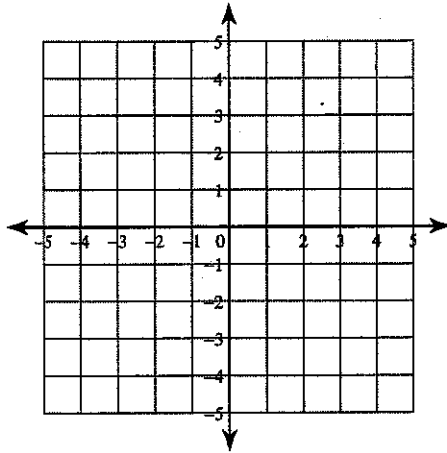
9) $4x + 3y > -6$
 $x - 3y \leq -9$



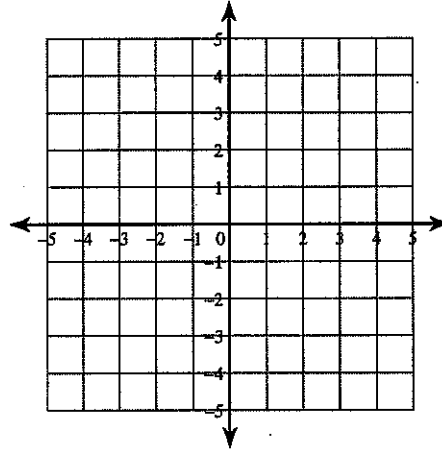
10) $y < -2$
 $x + y \geq 1$



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.

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