

Algebra I

Review for Quiz #4

Systems of Linear Inequalities (6.5)

Union and Intersection (8.4)

NAME: _____

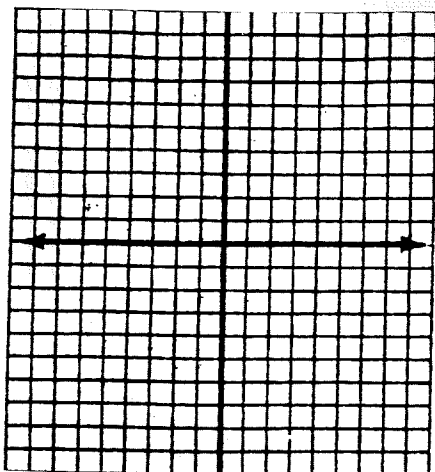
DATE: _____ HOUR: _____

You MAY NOT use a calculator on the quiz.

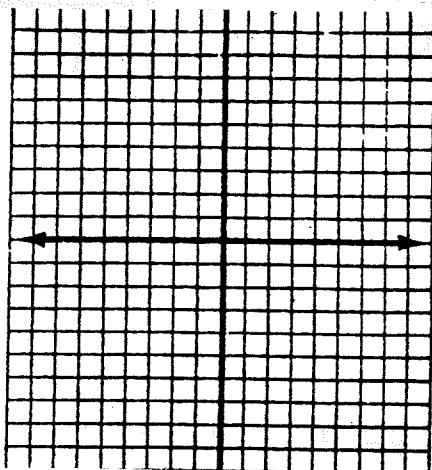
Part I. Graphing Inequalities

A. Graph each inequality.

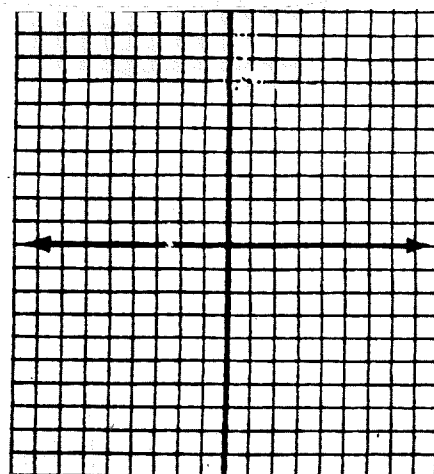
1. $y \geq \frac{1}{3}x + 2$



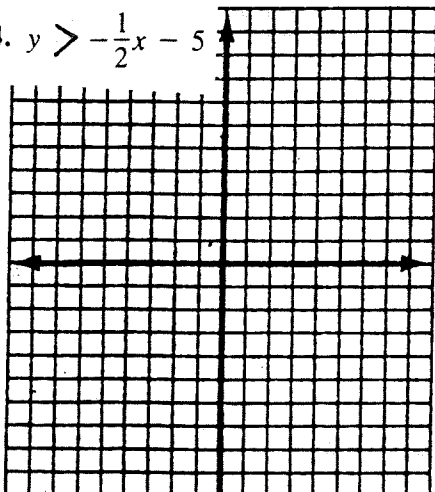
2. $y < \frac{2}{5}x + 4$



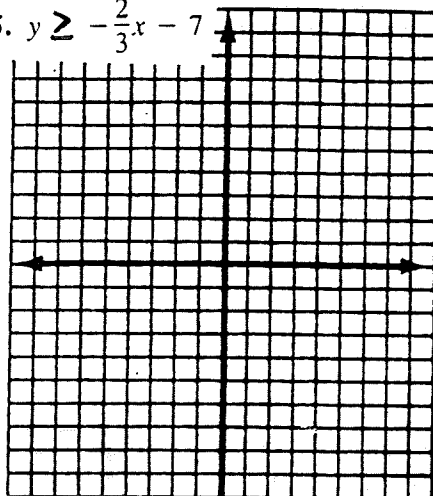
3. $y \leq -\frac{4}{5}x$



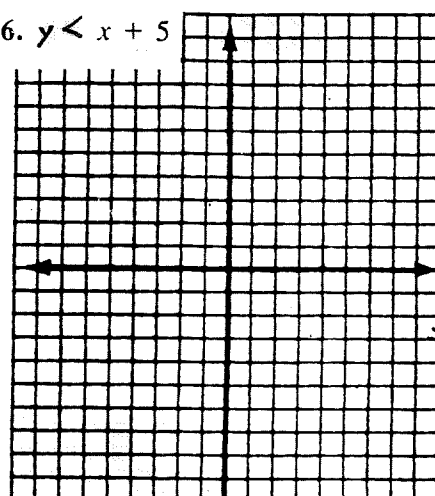
4. $y > -\frac{1}{2}x - 5$



5. $y \geq -\frac{2}{3}x - 7$



6. $y < x + 5$



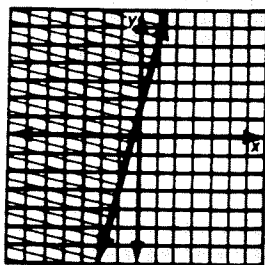
B. Match the graph with its inequality.

$y < \frac{2}{3}x - 2$

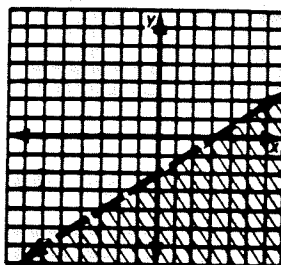
$y \geq 4x + 1$

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

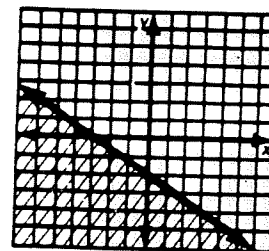
1.



2.



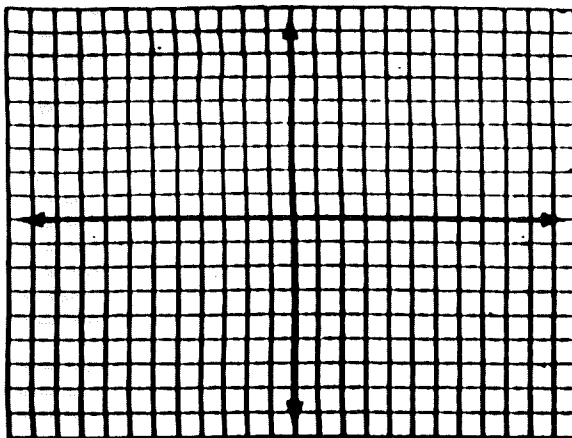
3.



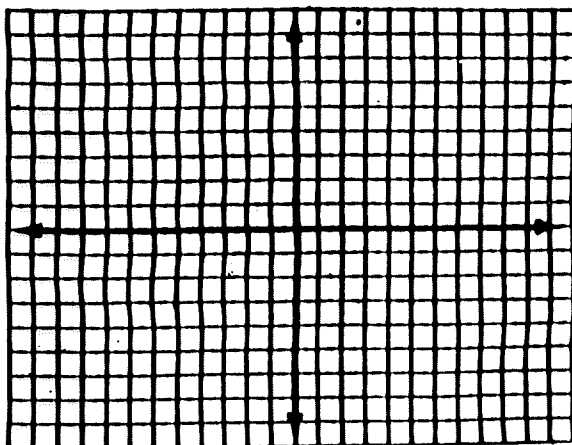
Part II. Systems of Inequalities

A. Graph the solution to each system.

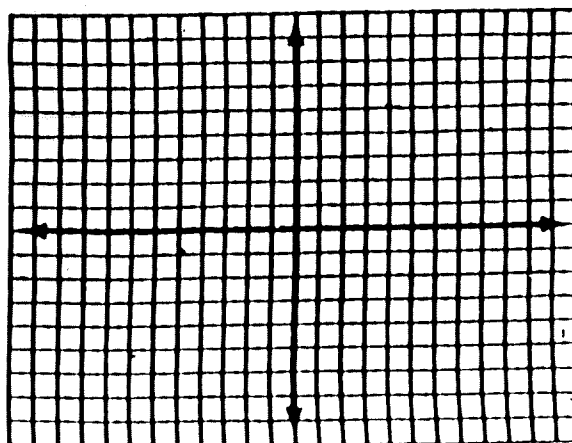
$$1. \begin{cases} y \leq -x + 4 & \text{(red)} \\ y > -3x + 2 & \text{(blue)} \end{cases}$$



$$2. \begin{cases} y \geq x - 5 & \text{(red)} \\ y > -x + 3 & \text{(blue)} \end{cases}$$



$$3. \begin{cases} y \leq x - 4 & \text{(red)} \\ y < -2x + 3 & \text{(blue)} \end{cases}$$



B. Determine if the point is in the SOLUTION to the system. Answer YES or NO.

$$1. \begin{cases} y \leq 2x - 4 \\ y > \frac{1}{2}x - 5 \end{cases}$$

(6, 0)

$$2. \begin{cases} y < x + 1 \\ y > -x + 5 \end{cases}$$

(4, 1)

$$3. \begin{cases} y < -3x + 4 \\ y > -x + 1 \end{cases}$$

(0, 0)
