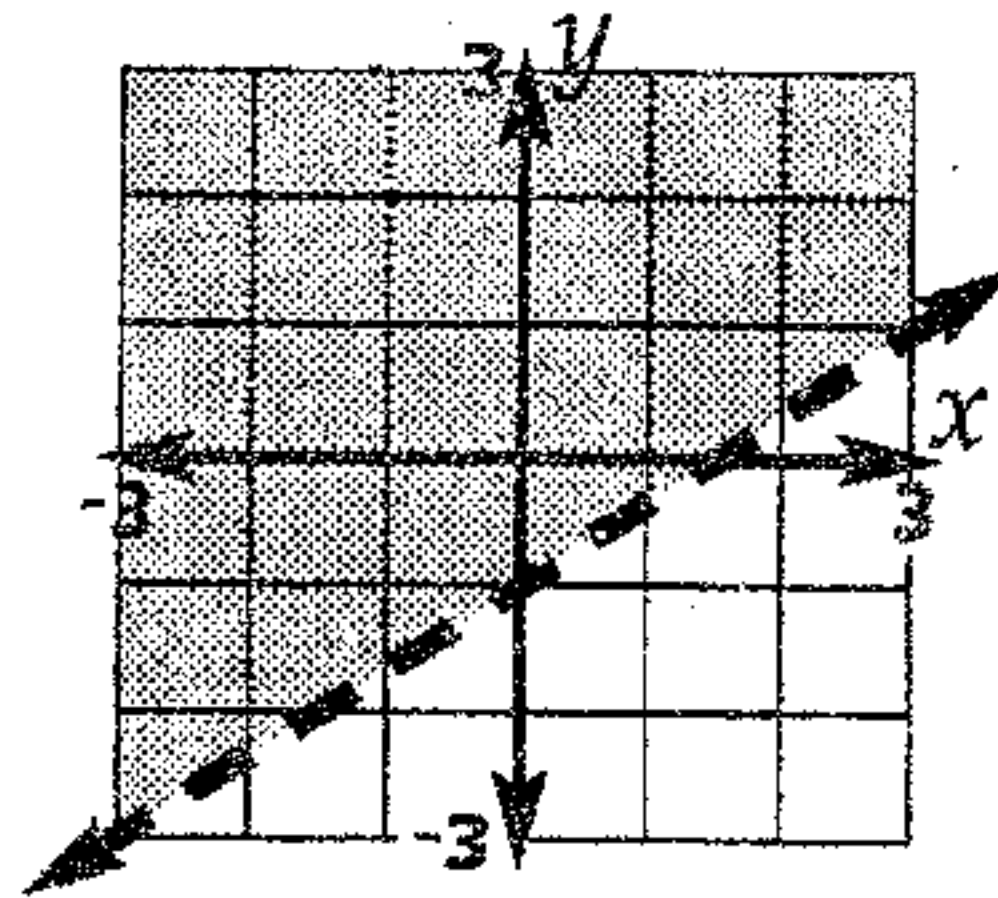


Name _____

Graphing Linear Inequalities in Two Variables

Quick Review

- Use a solid line for inequalities with \leq or \geq .
Use a dashed line for inequalities with $<$ or $>$.
- Test a point that is not on the line. If it is a solution, shade the half-plane containing that point. If it is not, shade the other half-plane.



$$y > \frac{2}{3}x - 1$$

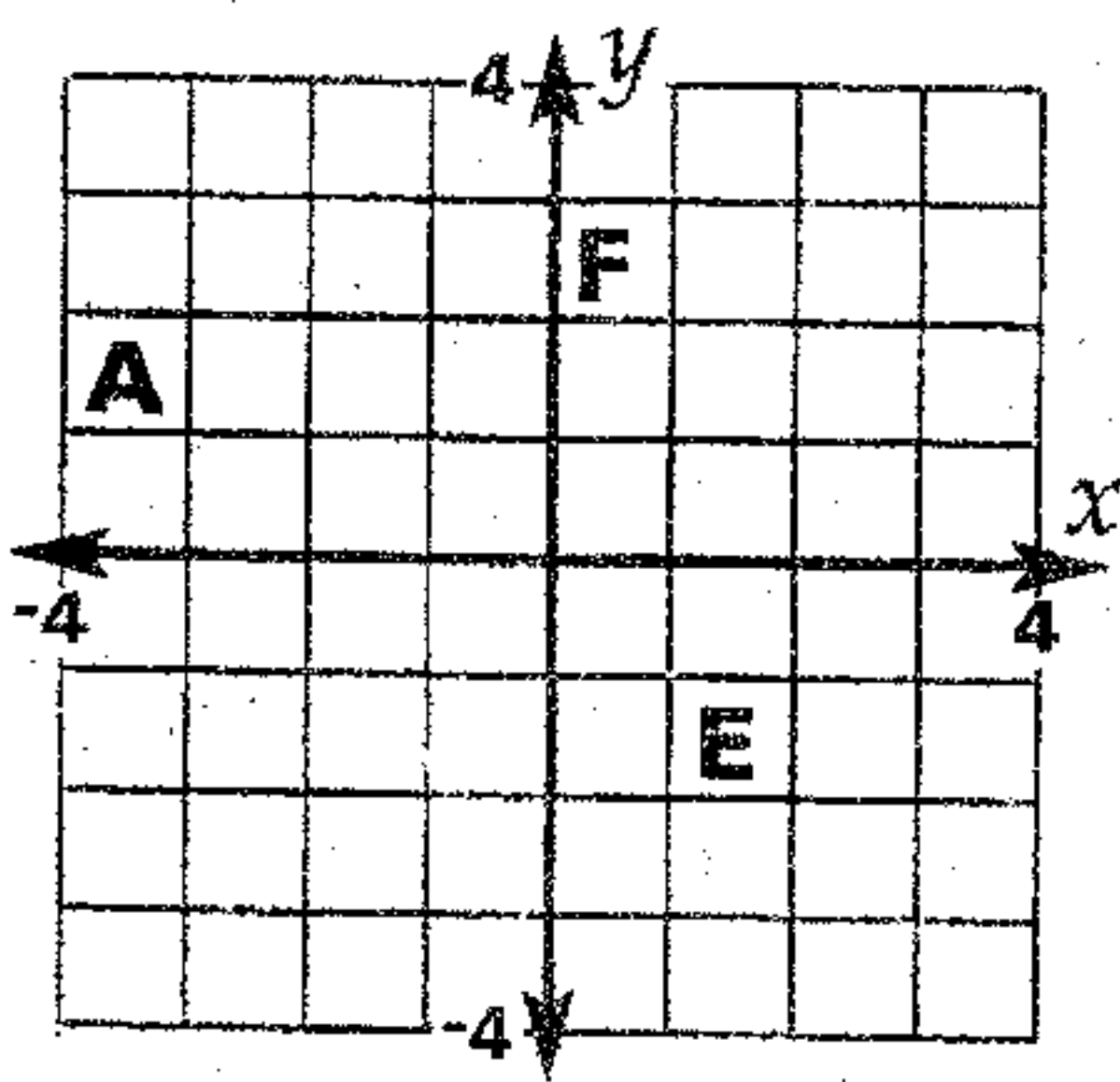
Test (0, 0)

$$0 > \frac{2}{3}(0) - 1$$

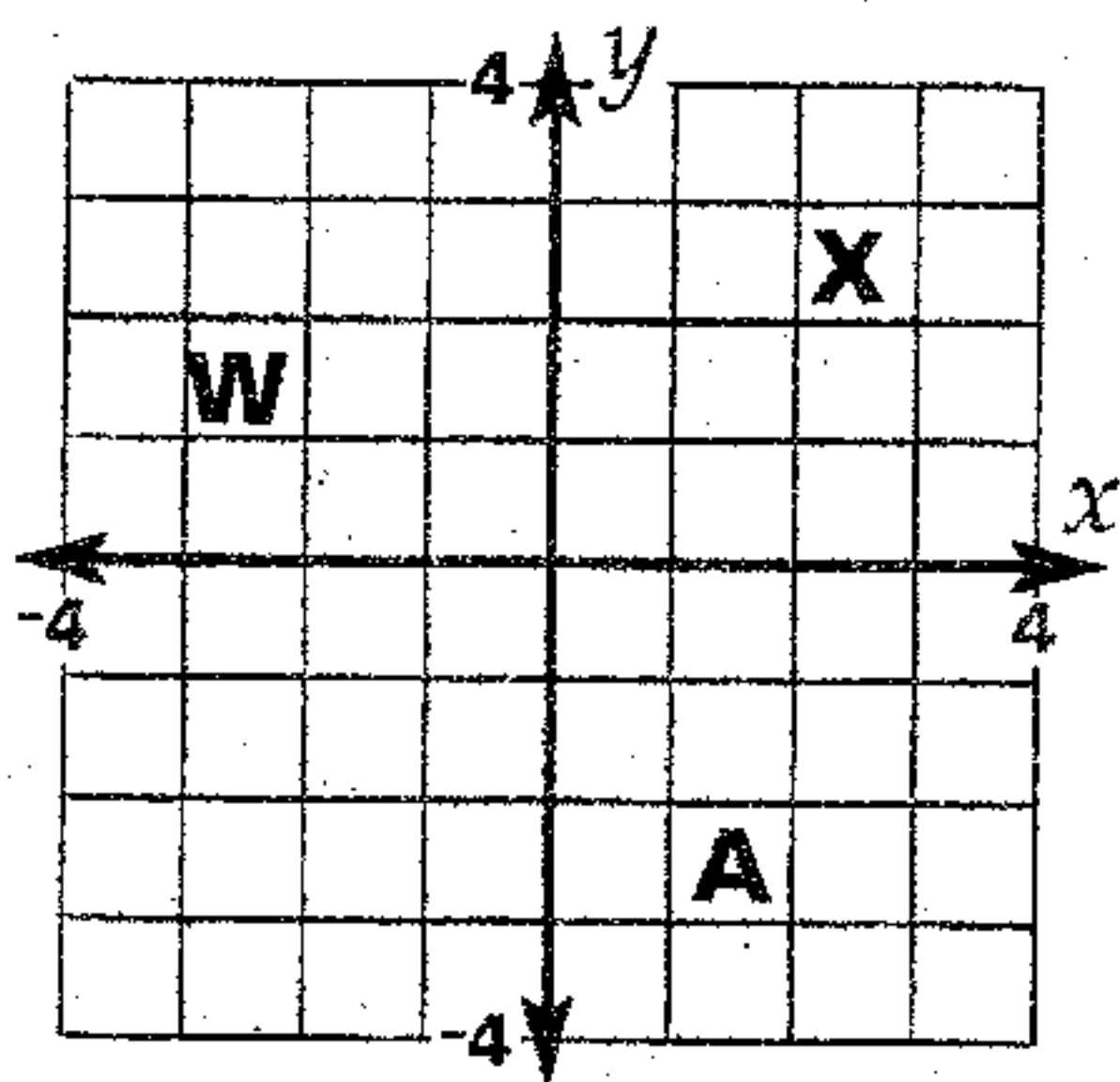
$$0 > -1 \text{ true}$$

Graph the inequalities. One letter in each graph will remain uncovered. Write that letter on the matching numbered line to spell out a message.

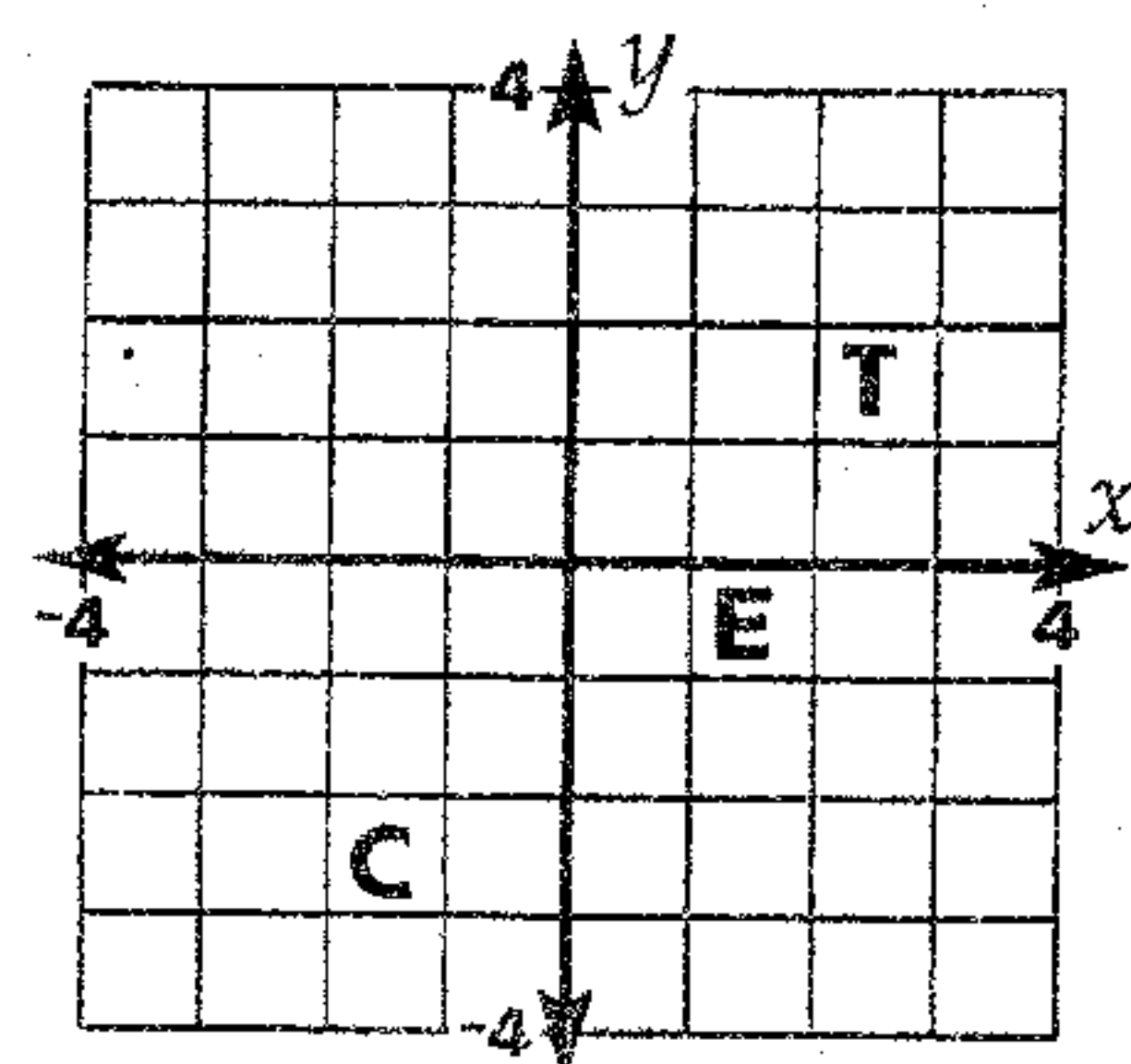
1. $y > x + 1$



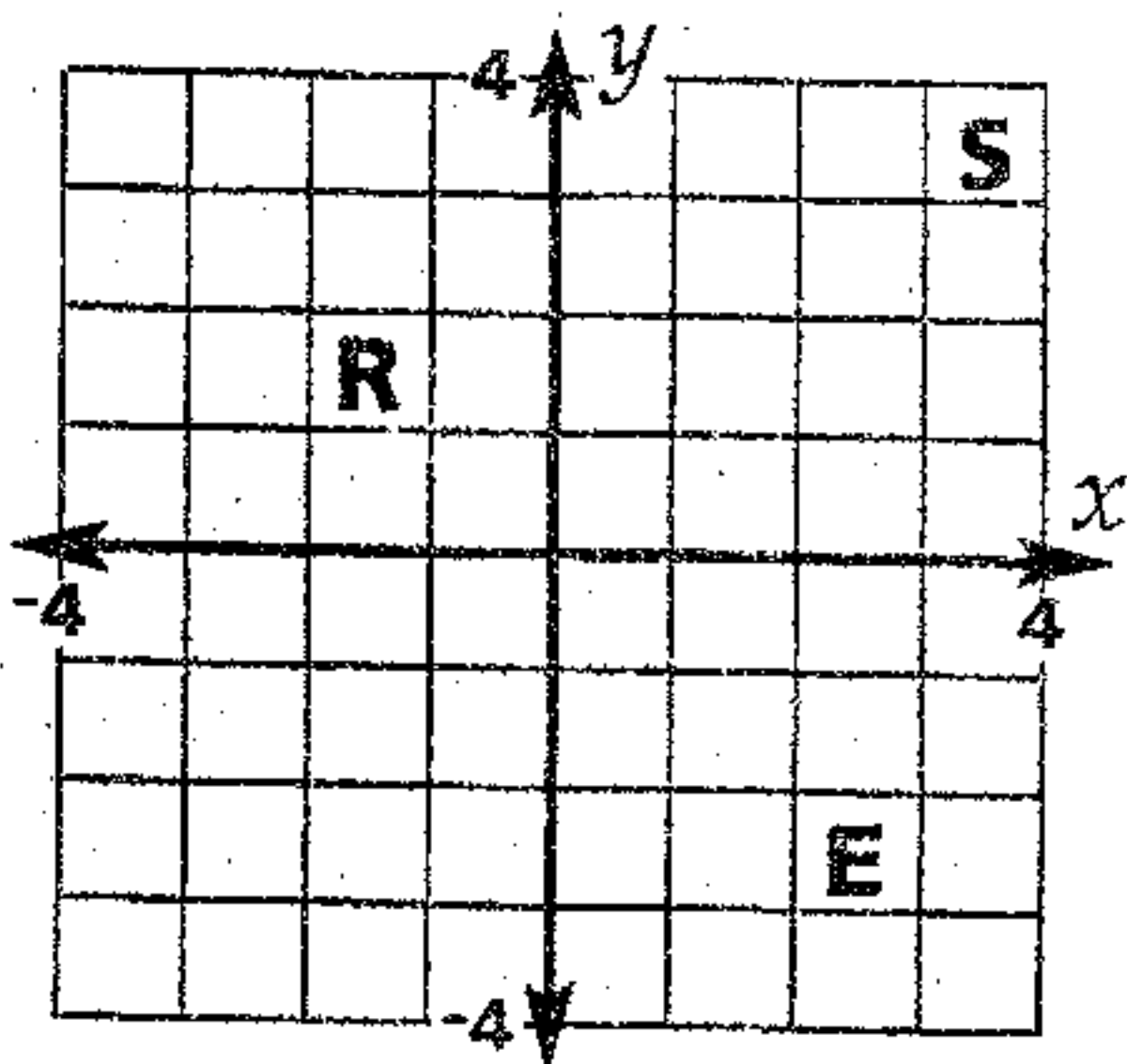
2. $y \leq -x + 1$



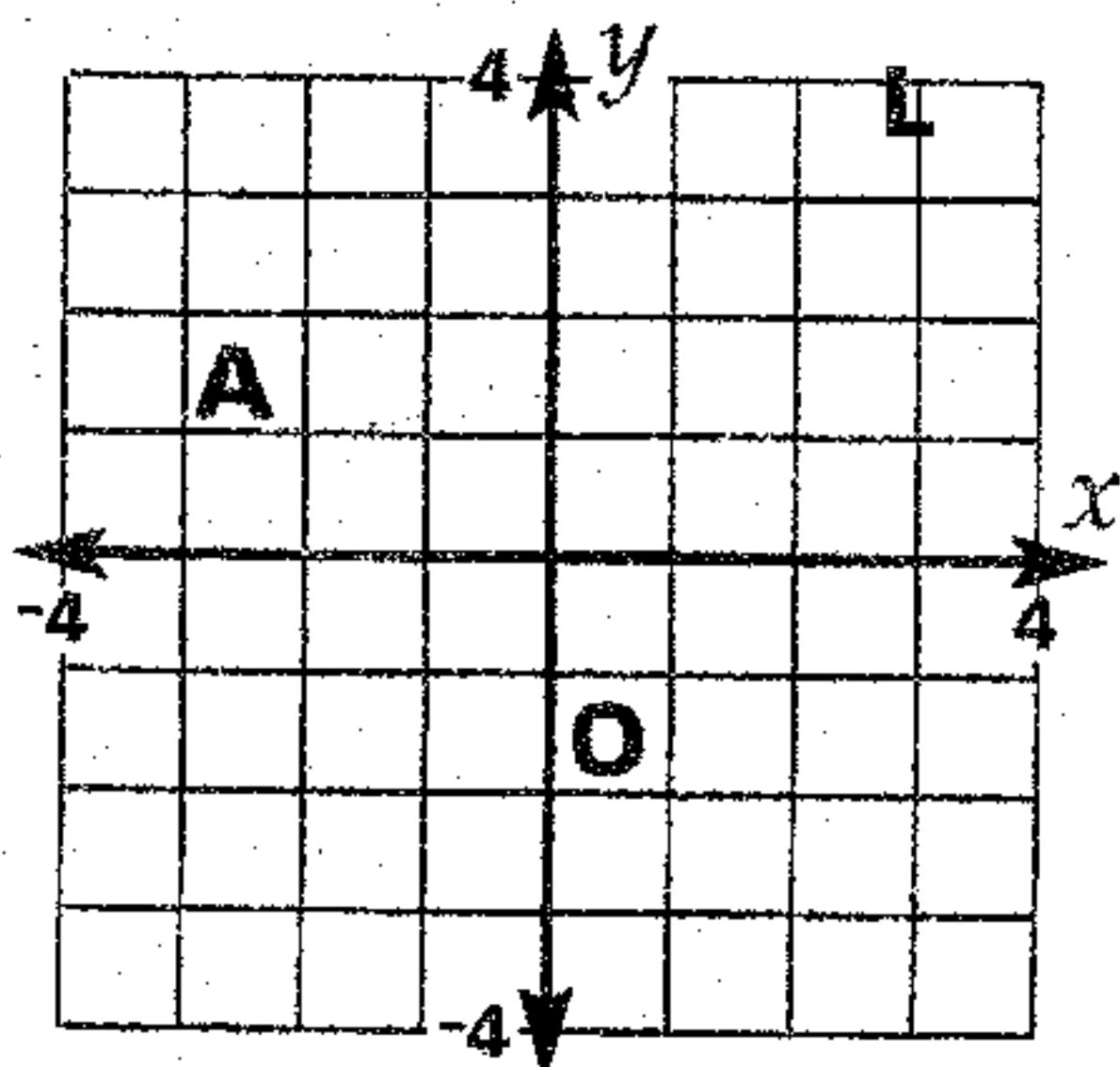
3. $y > -2x - 1$



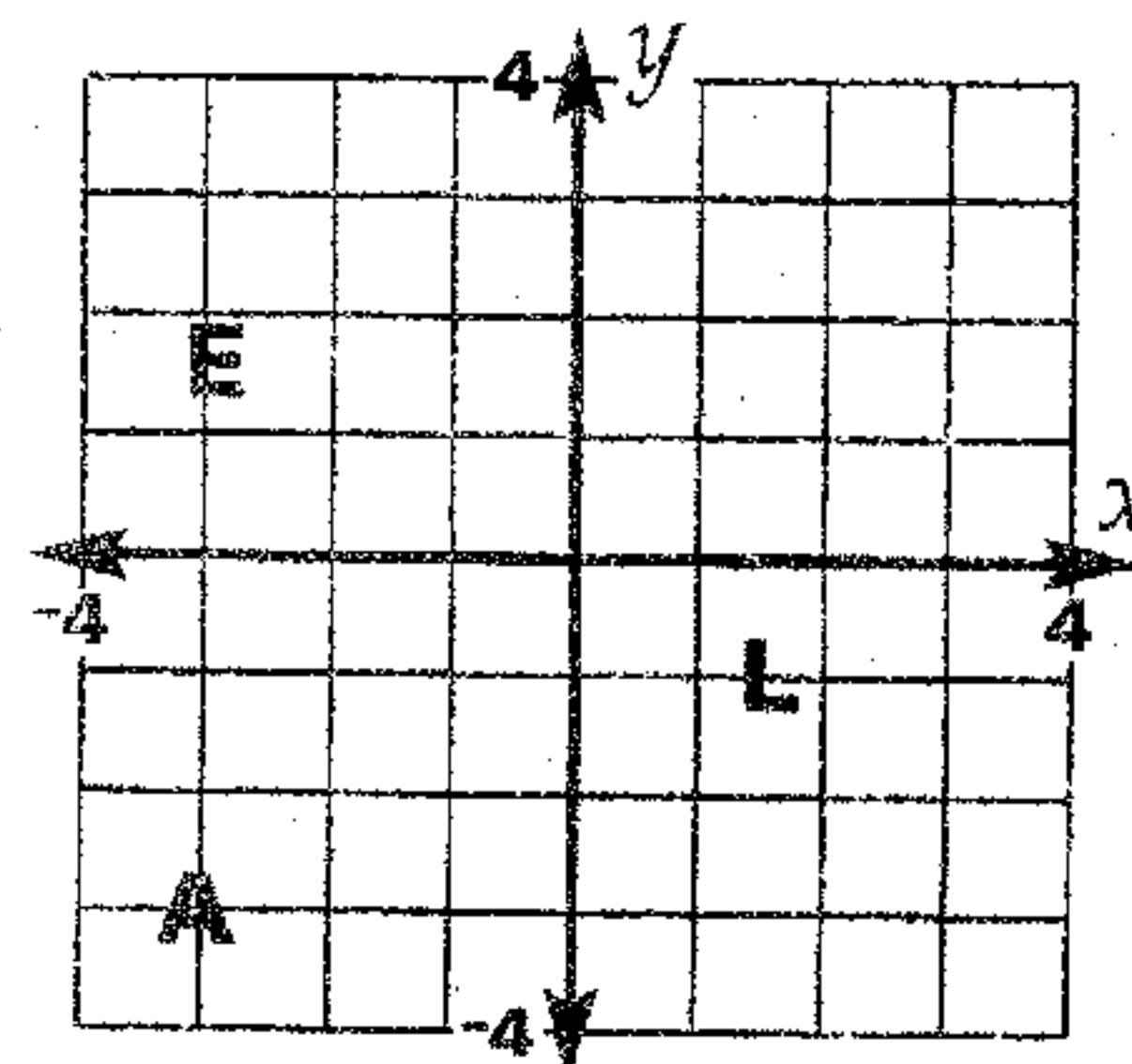
4. $y \geq \frac{1}{2}x - 2$



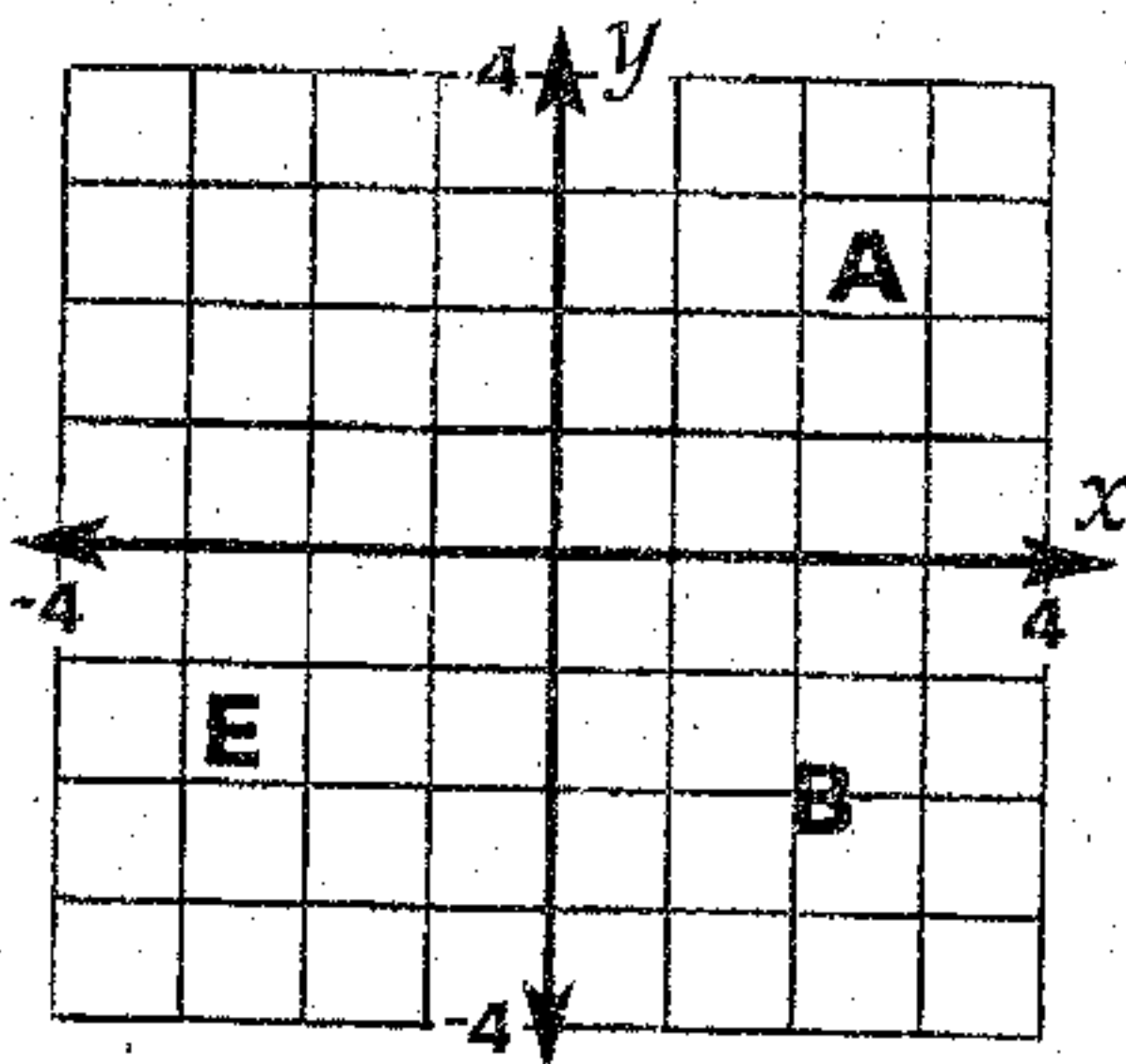
5. $y < 3$



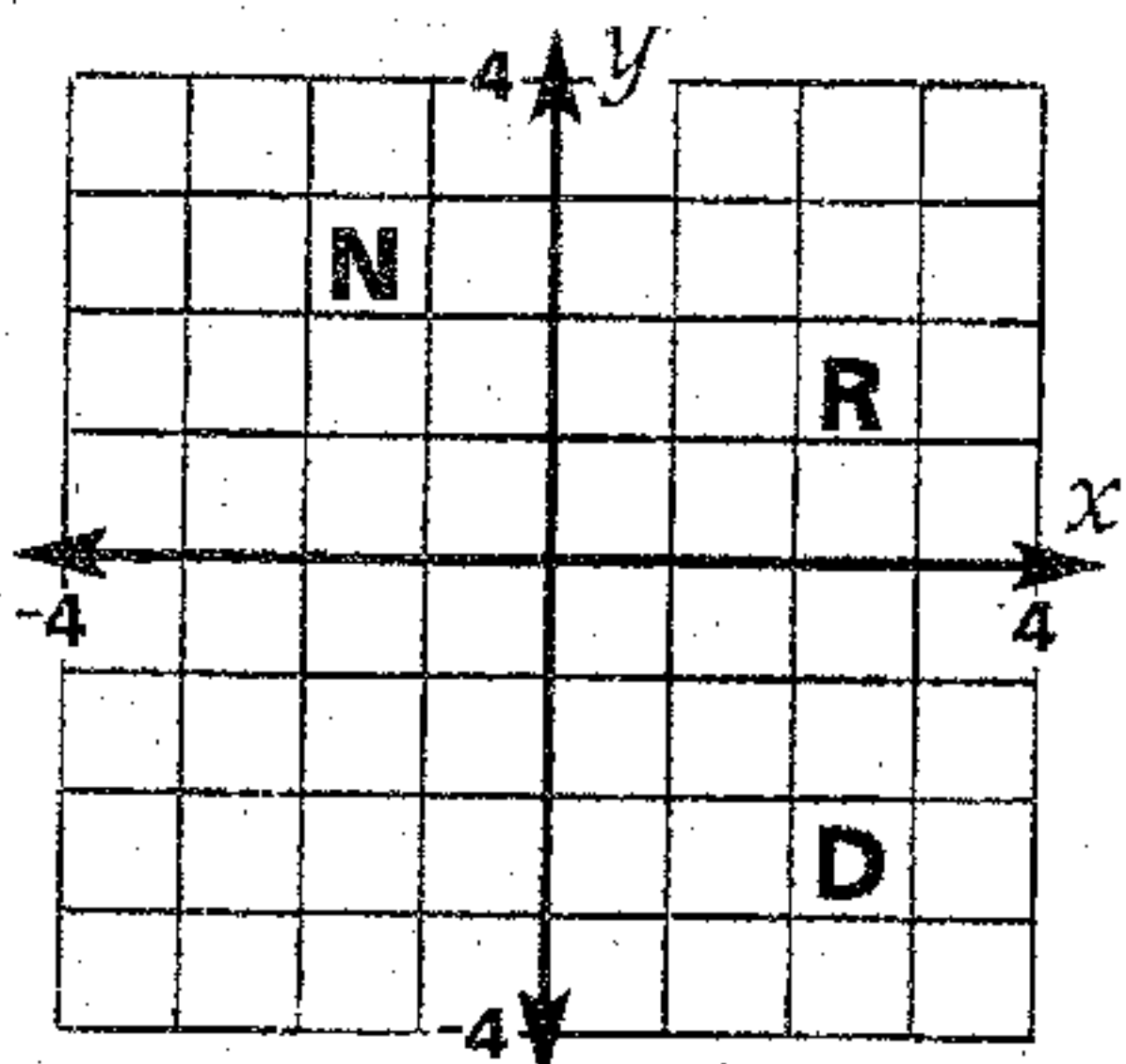
6. $y \leq -3x$



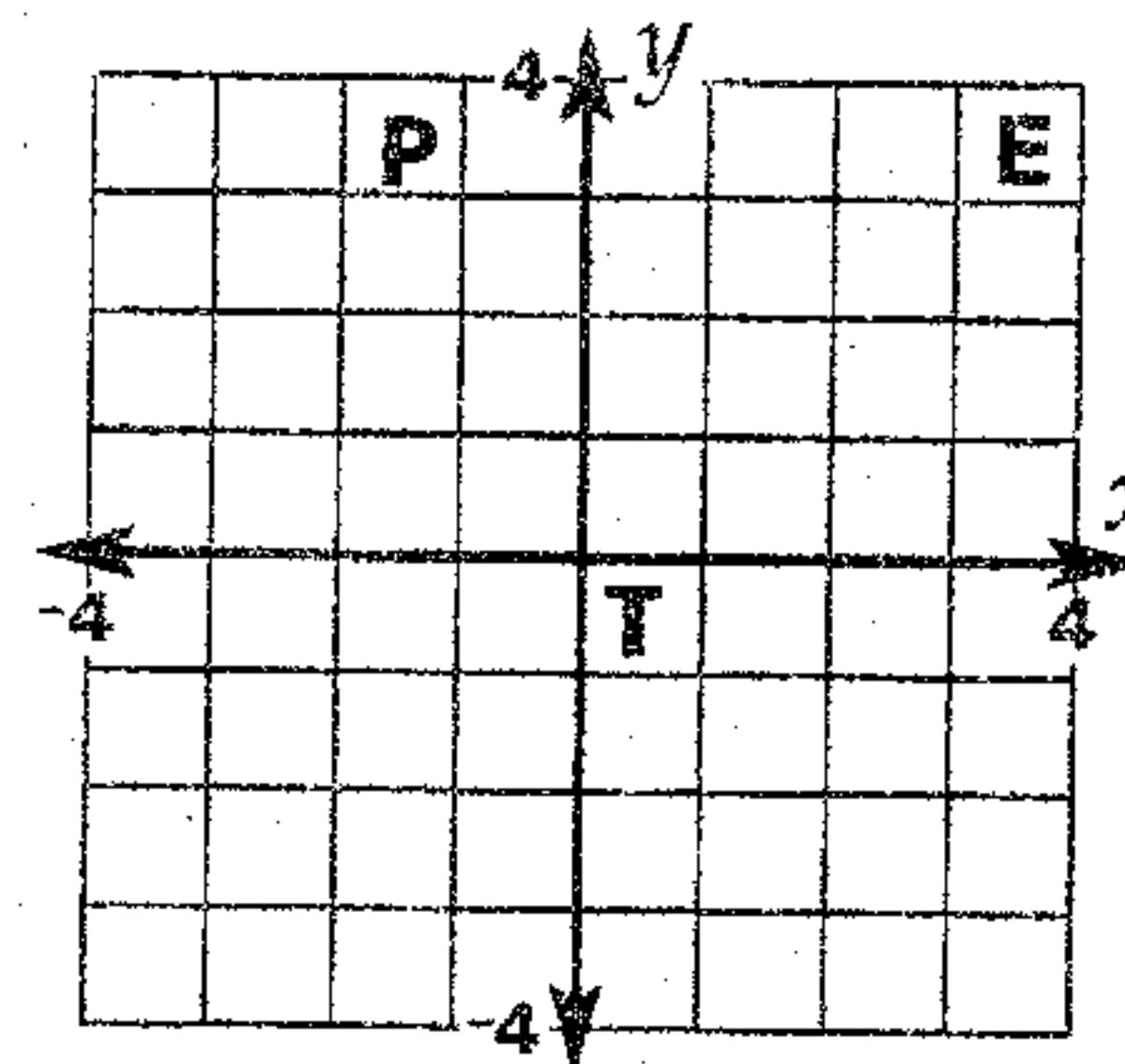
7. $x \geq -1$



8. $y < 3x - 1$



9. $y > -\frac{1}{3}x + 2$



1 2 3 4 5 6 7 8 9

!

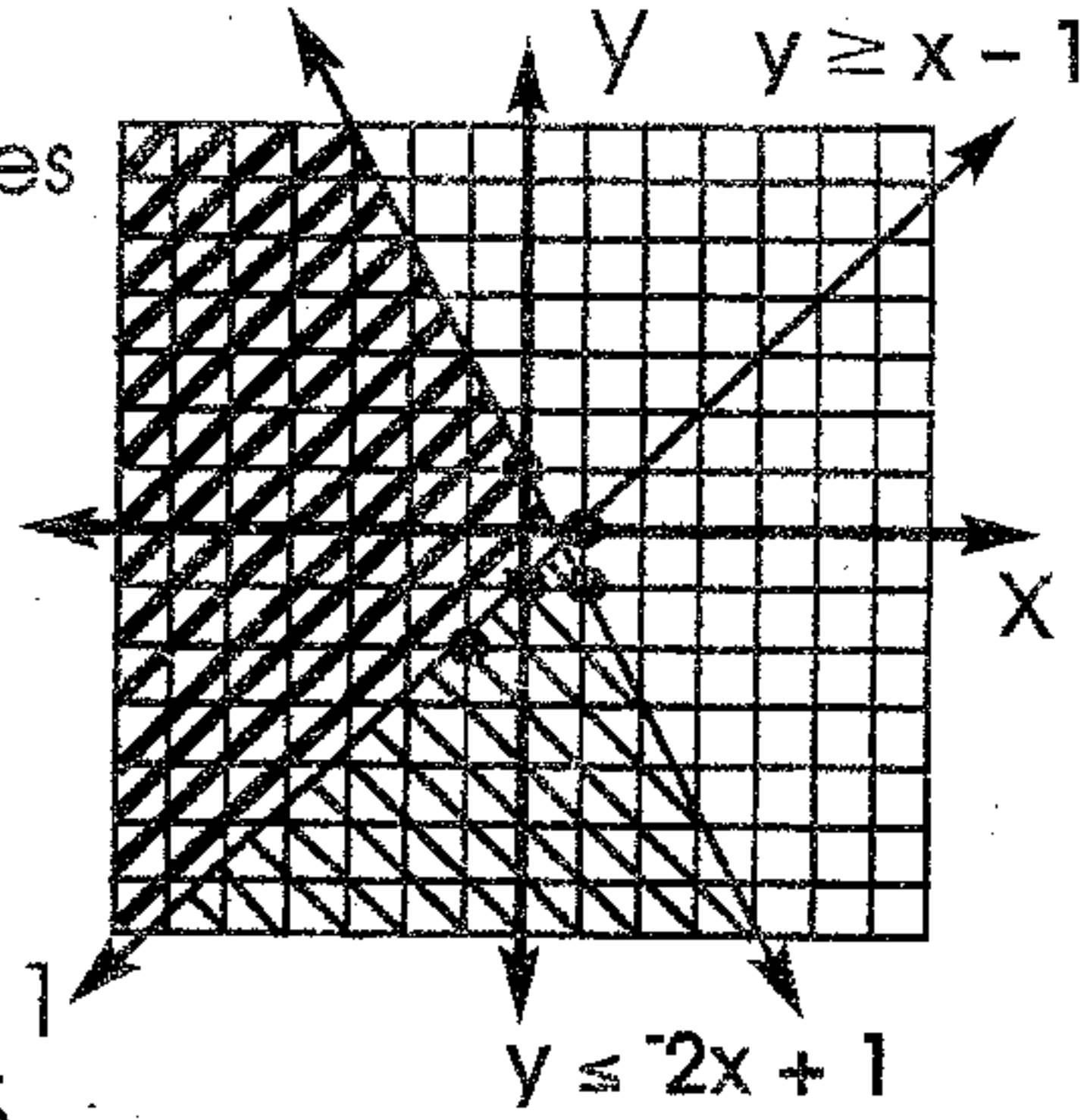


Graphing Systems of Linear Inequalities

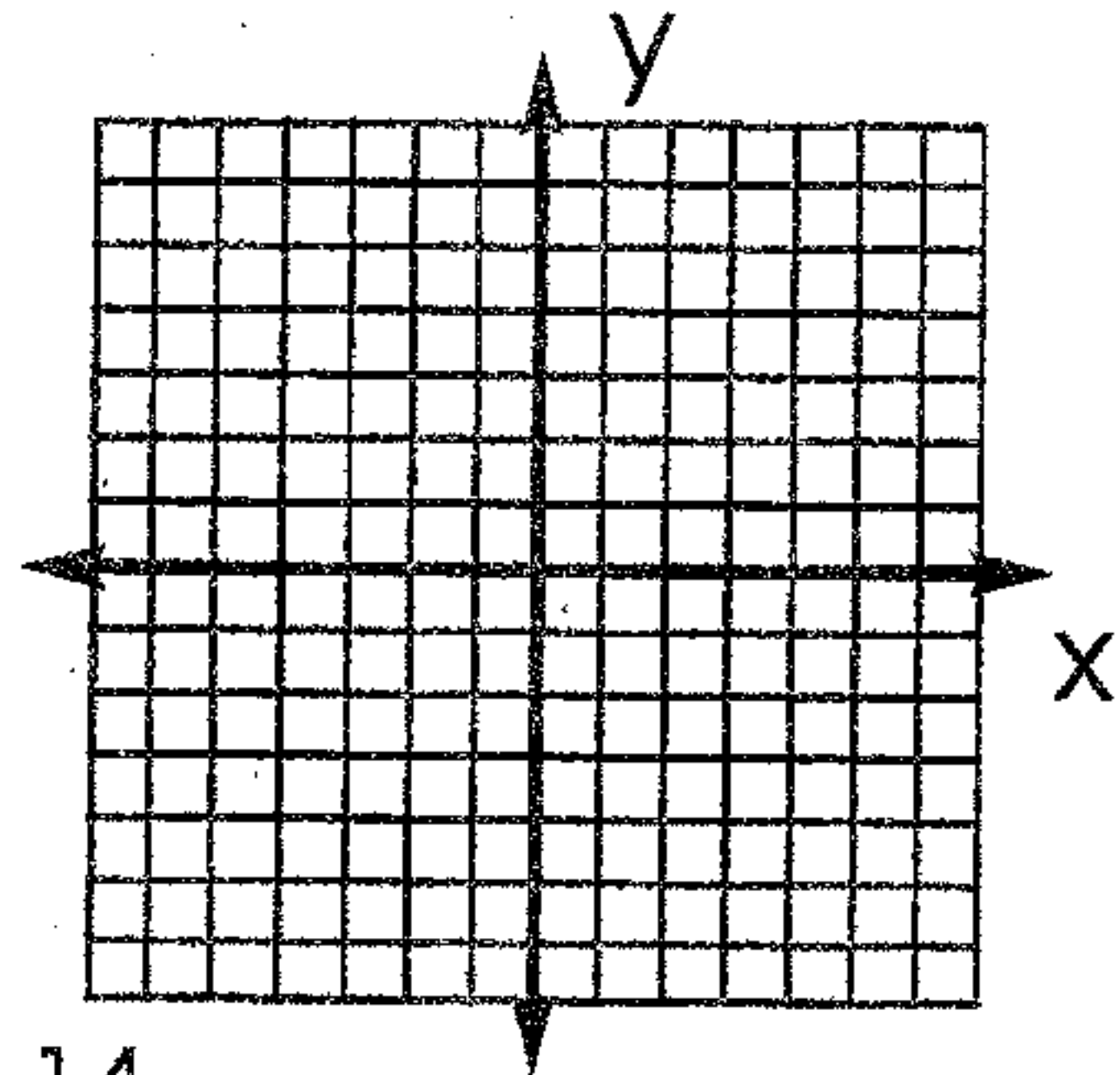
Graph the system of linear inequalities.

Example: $\begin{cases} y \geq x - 1 \\ y \leq 2x + 1 \end{cases}$

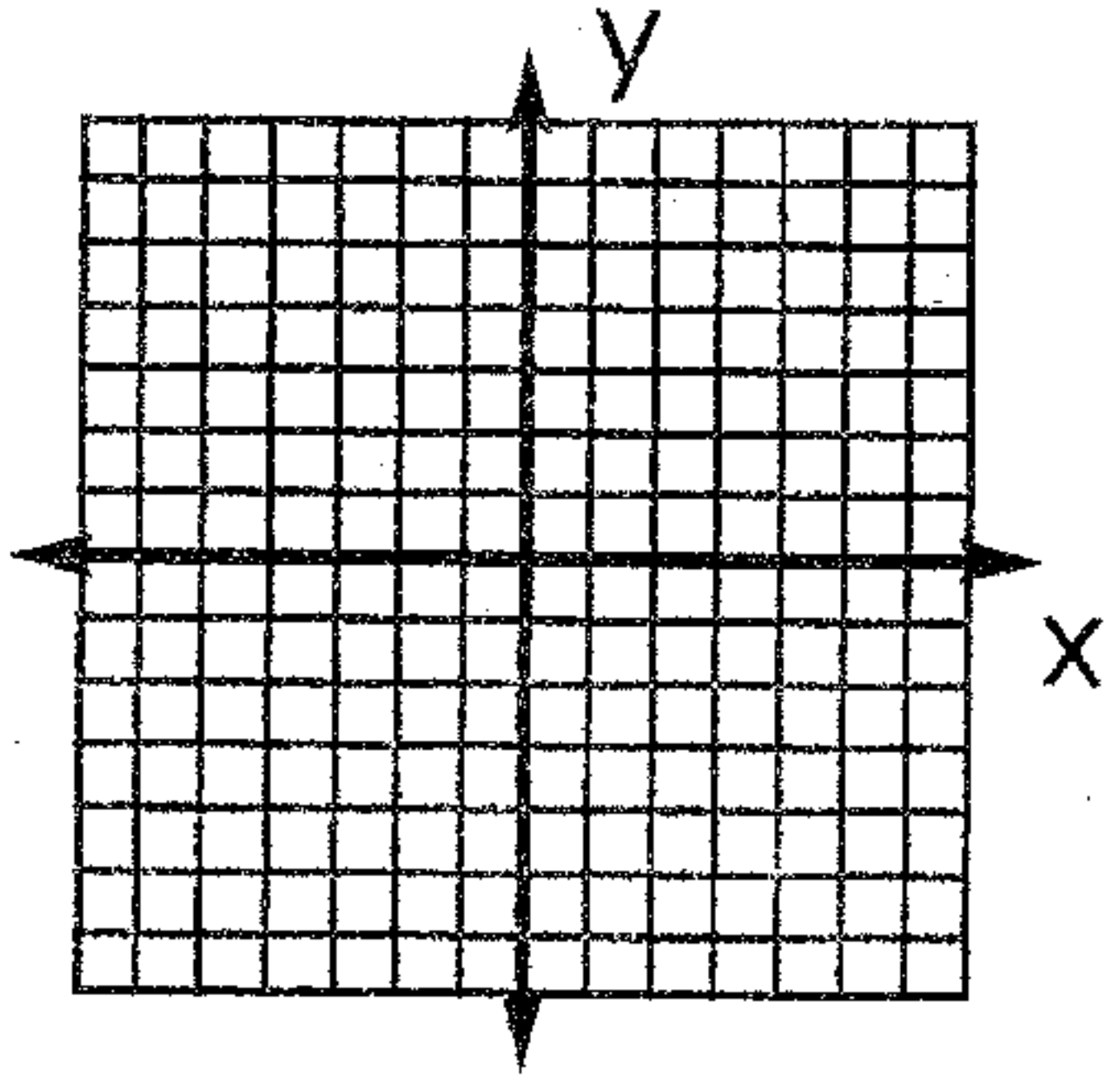
Note: $<$ or $>$ = dashed lines
 \leq or \geq = solid lines



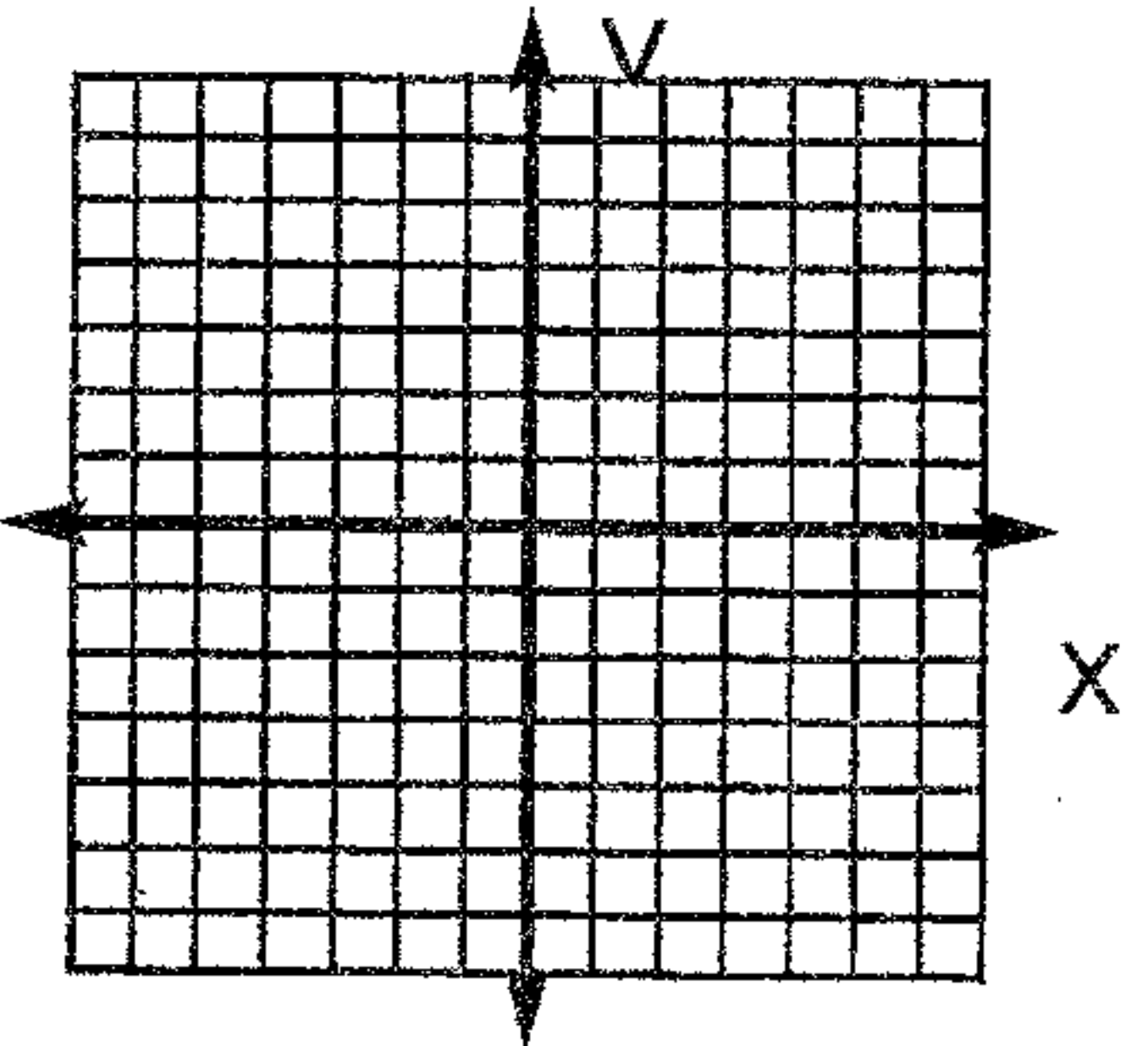
2. $\begin{cases} 3x - 5y > 11 \\ 4x - 3y \geq 5 \end{cases}$



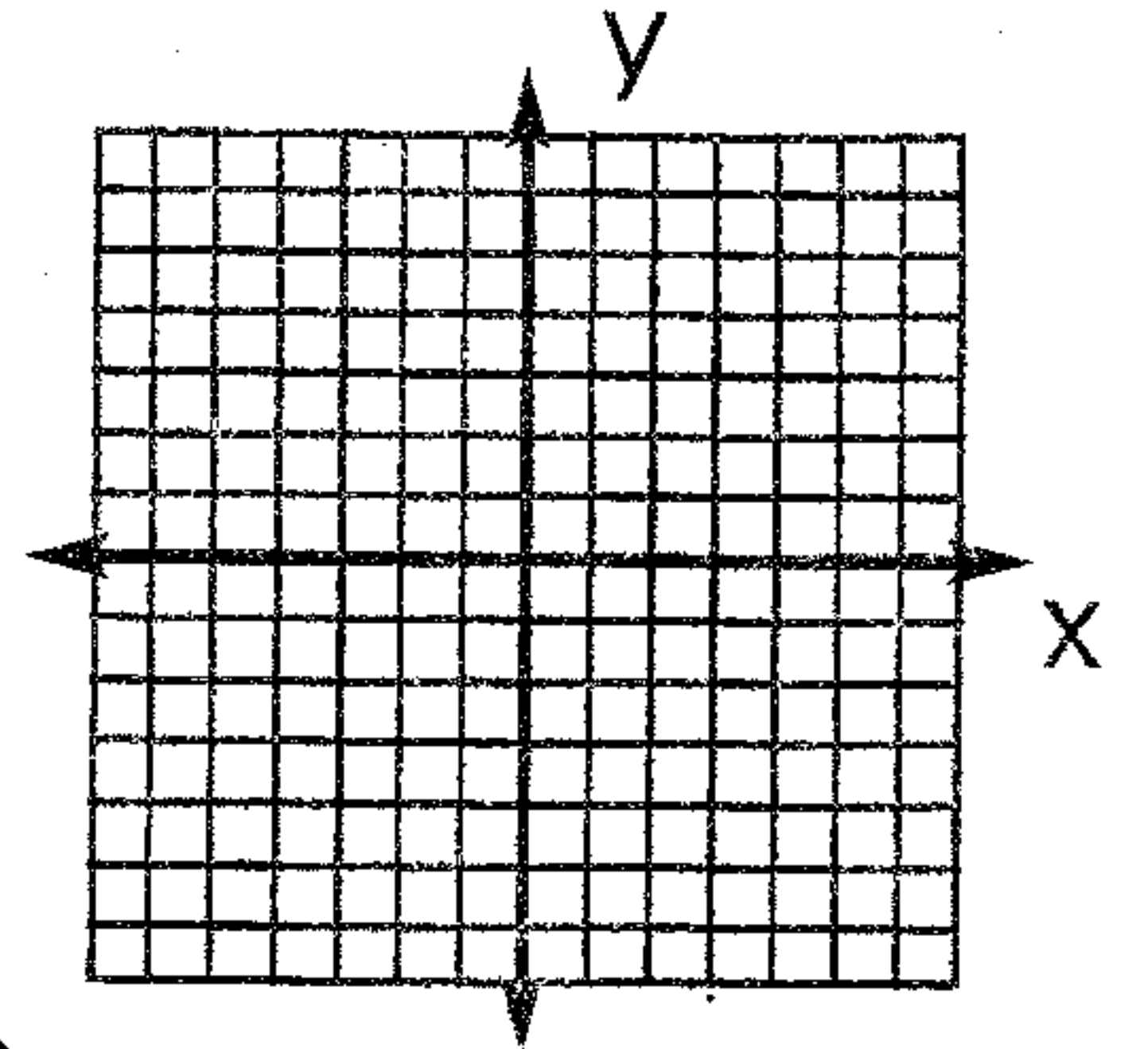
4. $\begin{cases} 2x + 3y \leq 14 \\ 3x - 2y < 5 \end{cases}$



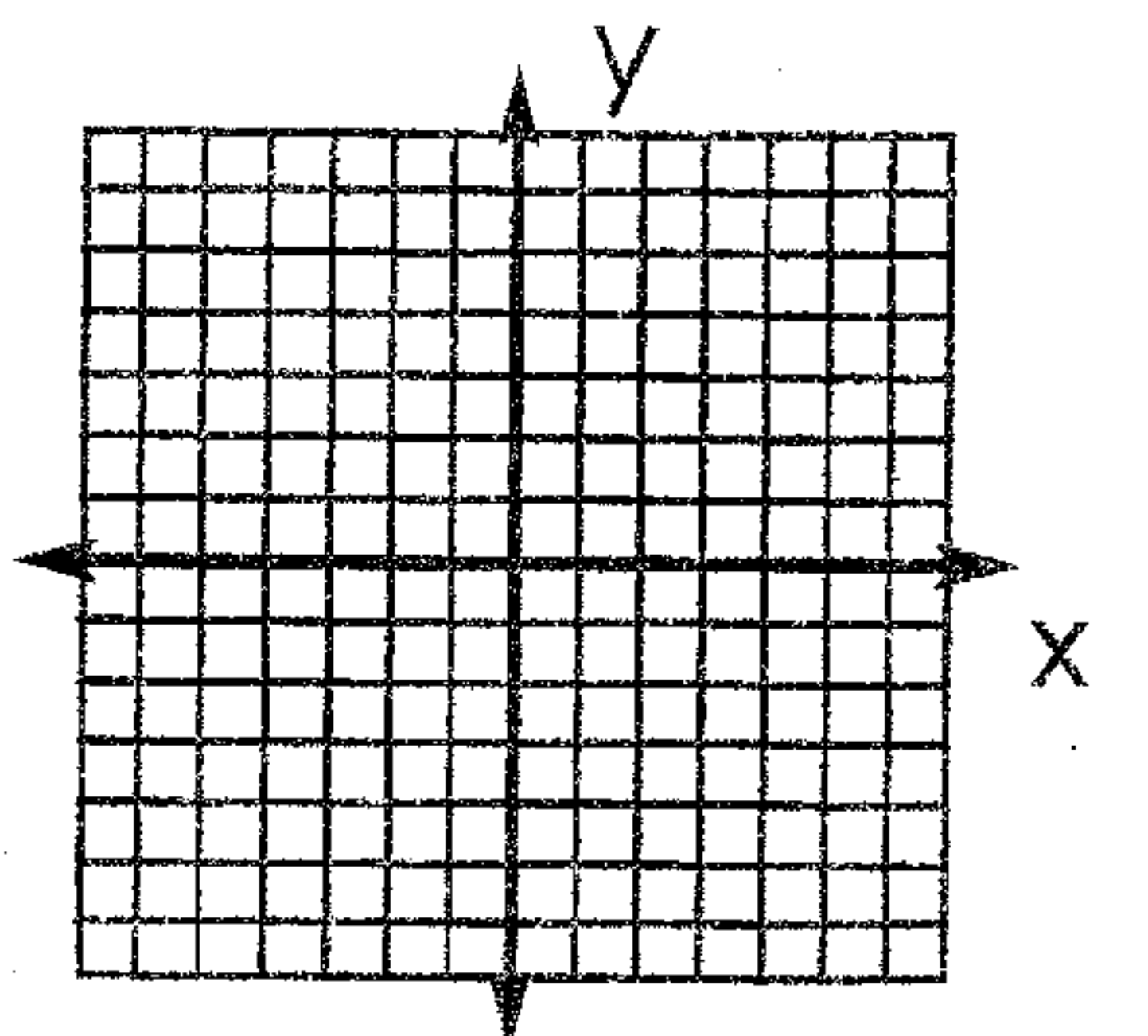
6. $\begin{cases} x \geq 6 \\ y \leq 2x - 6 \end{cases}$



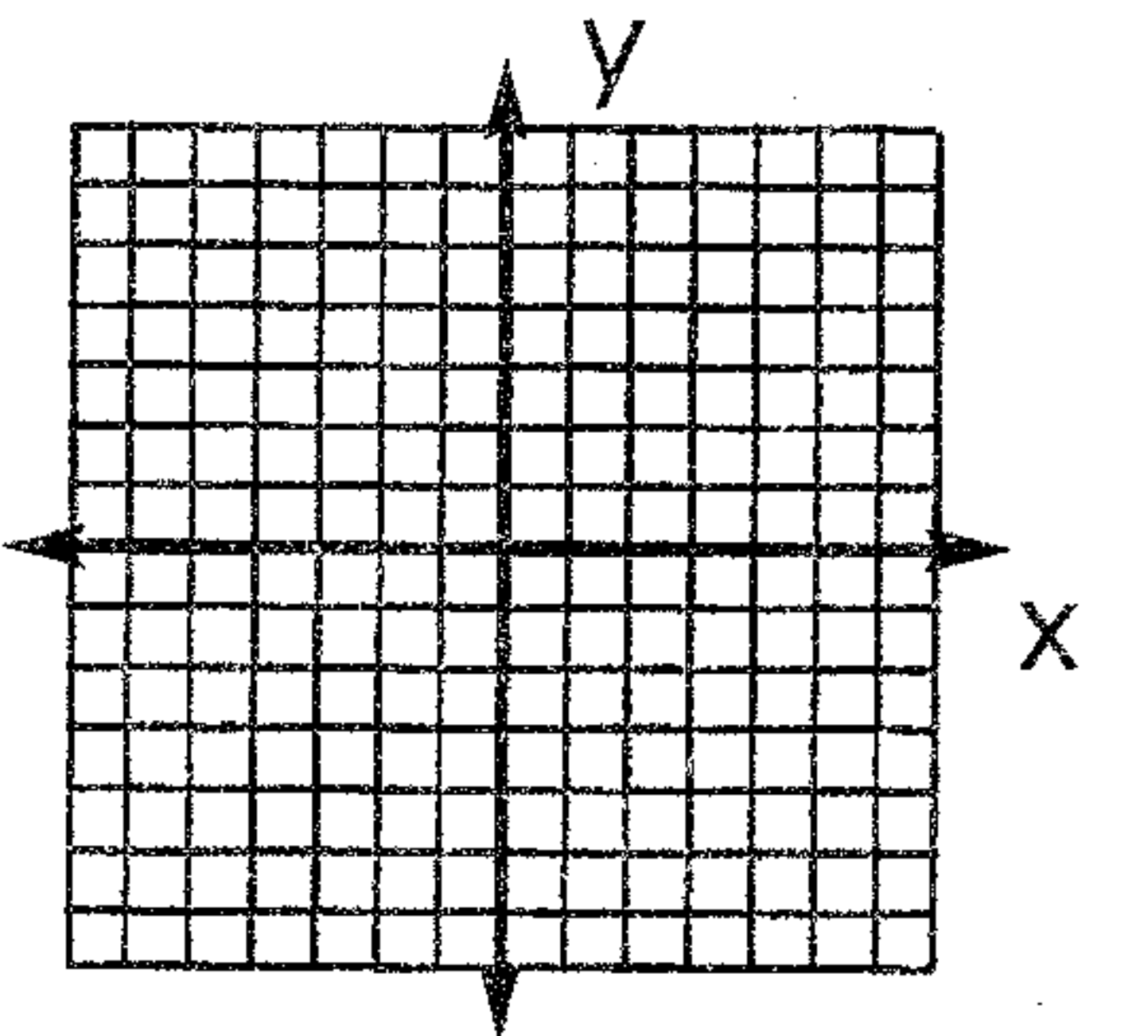
1. $\begin{cases} x - 2y < 8 \\ 3x + y > 4 \end{cases}$



3. $\begin{cases} y > \frac{1}{2}x + 3 \\ y > 3 \end{cases}$



5. $\begin{cases} 5x + 2y > 8 \\ 2x - 5y \leq 9 \end{cases}$



7. $\begin{cases} y > 2x + 4 \\ y \leq 6x - 3 \end{cases}$

