



NAME _____

Module 10 Solving Systems of Linear Equations and Inequalities

Lesson 4 Solving Systems of Linear Inequalities by Graphing

Is the given point a solution to the system of inequalities? Show all work.

1. (4, 4) $\begin{cases} x > 2 \\ y \leq 3 \end{cases}$

No

2. (5, -3) $\begin{cases} x \geq y \\ y < -3 \end{cases}$

No

3. (0, 7) $\begin{cases} x - y \leq 10 \\ -3x + 2y \geq 7 \end{cases}$

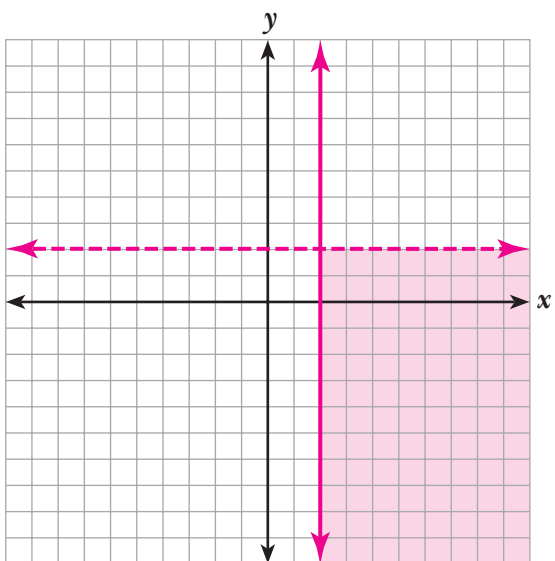
Yes

4. (1, -1) $\begin{cases} 3x - 2y \leq 5 \\ -2x + 4y \geq 6 \end{cases}$

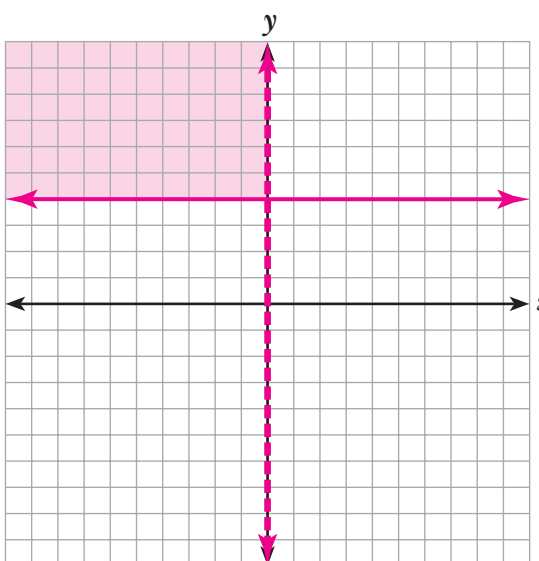
No

Graph the solution set for each system of linear inequalities.

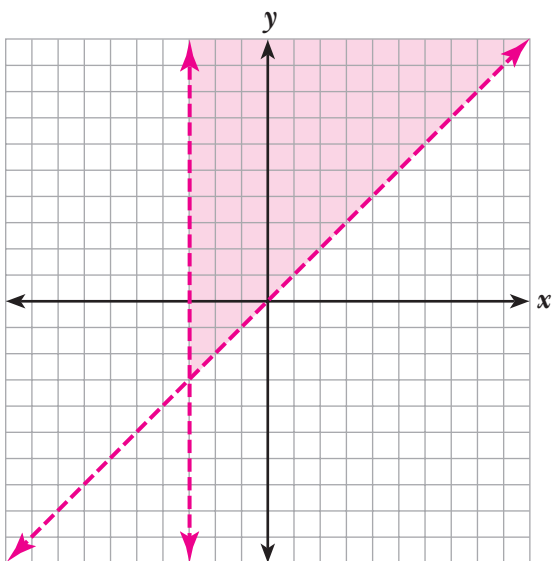
5. $\begin{cases} x \geq 2 \\ y < 2 \end{cases}$



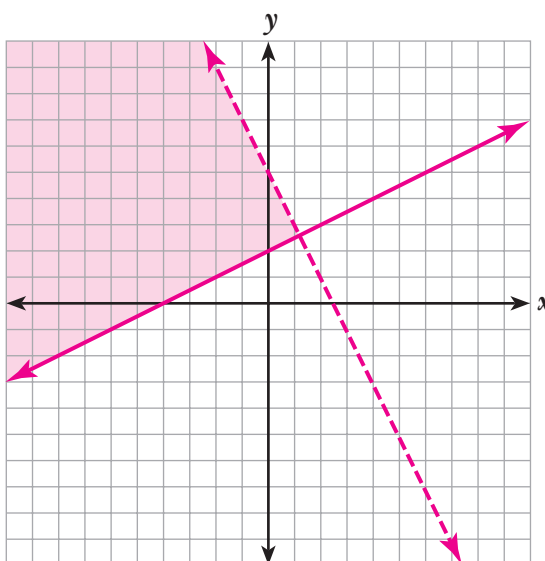
6. $\begin{cases} x < 0 \\ y \geq 4 \end{cases}$



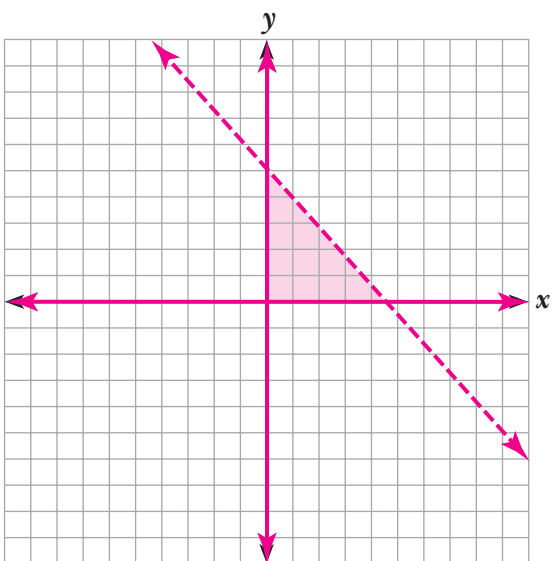
7. $\begin{cases} x > -3 \\ y > x \end{cases}$



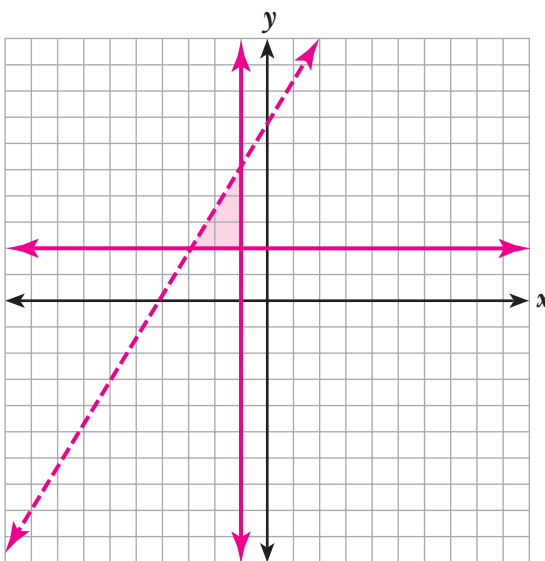
8. $\begin{cases} y \geq \frac{1}{2}x + 2 \\ 2x + y < 5 \end{cases}$



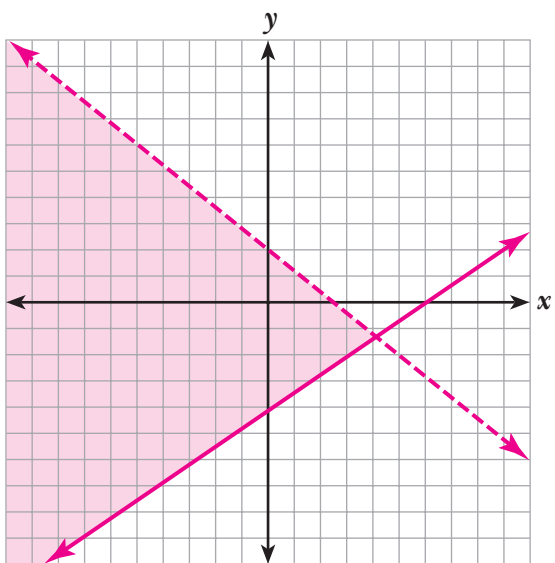
9. $\begin{cases} x \geq 0 \\ y \geq 0 \\ y < -x + 5 \end{cases}$



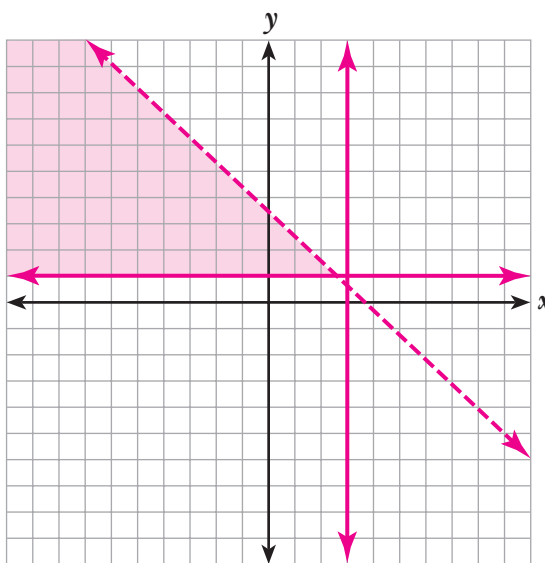
10. $\begin{cases} x \leq -1 \\ y \geq 2 \\ y < 2x + 7 \end{cases}$



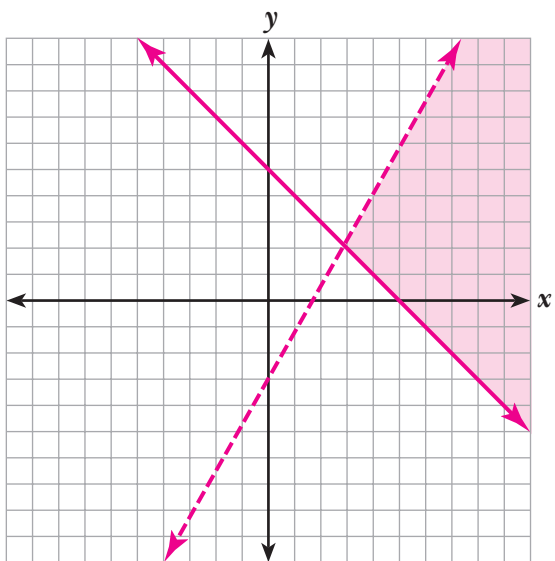
11.
$$\begin{cases} 3x + 4y < 8 \\ y \geq \frac{2}{3}x - 4 \end{cases}$$



12.
$$\begin{cases} x \leq 3 \\ y \geq 1 \\ x + y < 3 \end{cases}$$



13.
$$\begin{cases} y \leq 2x - 3 \\ y > x + 5 \end{cases}$$



Solve.

14. The sum of three consecutive odd integers is less than 70. Find the three integers with the greatest values.

21, 23, 25

15. Matt's scores on the last three algebra tests were 78, 93, and 63. What is the lowest grade he can get on the next test to have an average of at least 80?

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