

## 4.2.A Solving Systems of Linear Inequalities

- 1.) Solve a system of linear inequalities.
- 2.) Write a system of linear inequalities represented by a graph.

Nov 4-10:28 AM

What is a system of inequalities?  
What is its solution?

A system of inequalities means more than one inequality.

A solution to a system of inequalities is where the solutions are the same for ALL the inequalities.

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# Solving steps!

1. Graph each linear inequality, with shading, in the SAME coordinate plane.
2. Where the shading overlaps is the solution to the SYSTEM of inequalities!!!

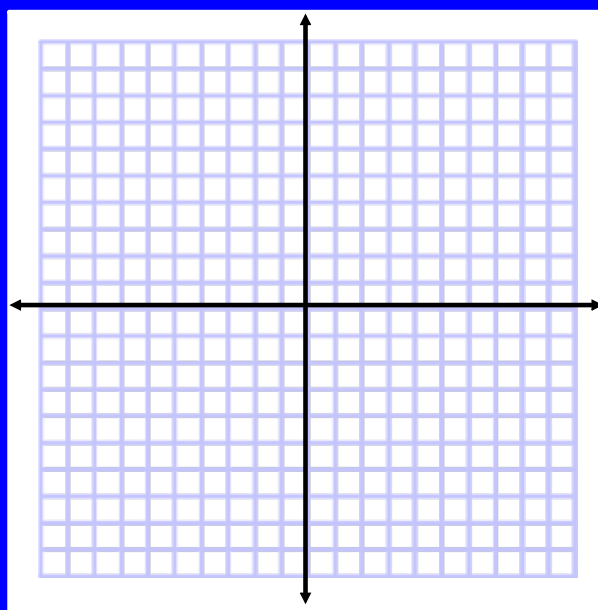
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## Solving Systems of Linear Inequalities

Graph the system of linear inequalities.

$$y \leq 3x + 2$$

$$y > -4x$$



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## Solving Systems of Linear Inequalities

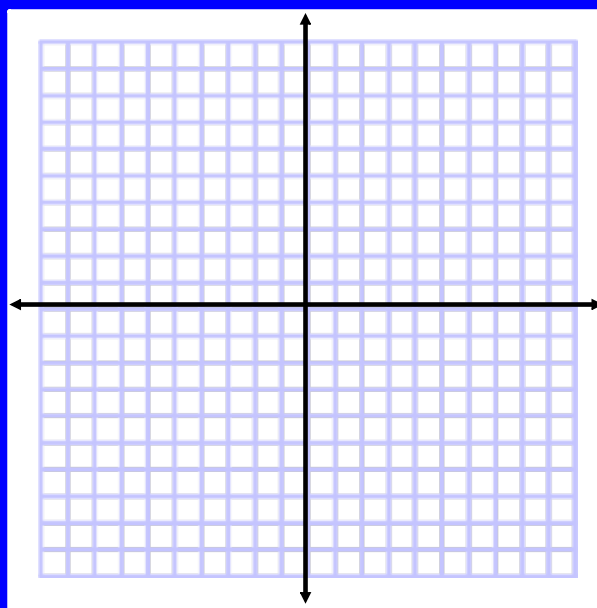
Graph the system of linear inequalities.

$$y \leq x + 1$$

$$x > 1$$

$$x < 3$$

$$y \geq 0$$



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## Solving Systems of Linear Inequalities

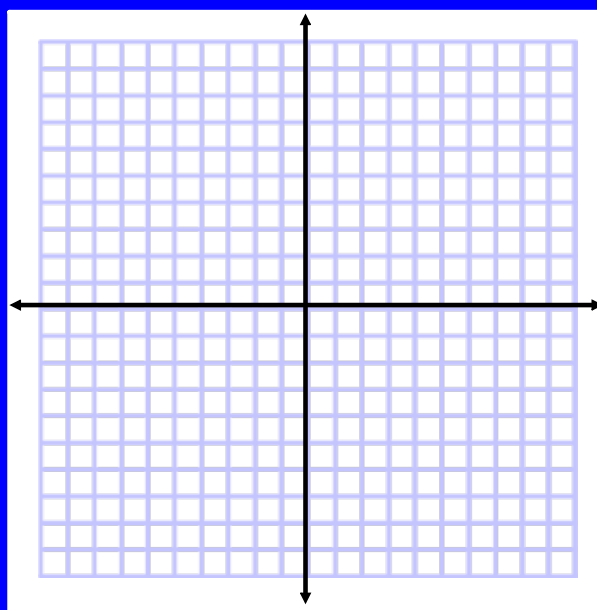
Graph the system of linear inequalities.

$$x \geq -1$$

$$x \leq -2$$

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

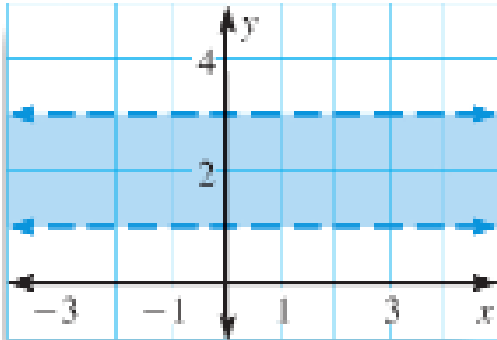
$$y \leq \frac{1}{2}x + 2$$



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## Solving Systems of Linear Inequalities

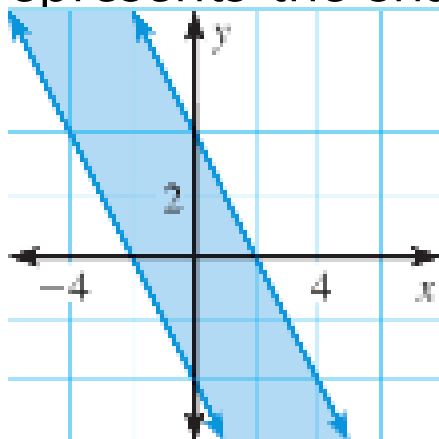
Write a system of inequalities that represents the shaded region.



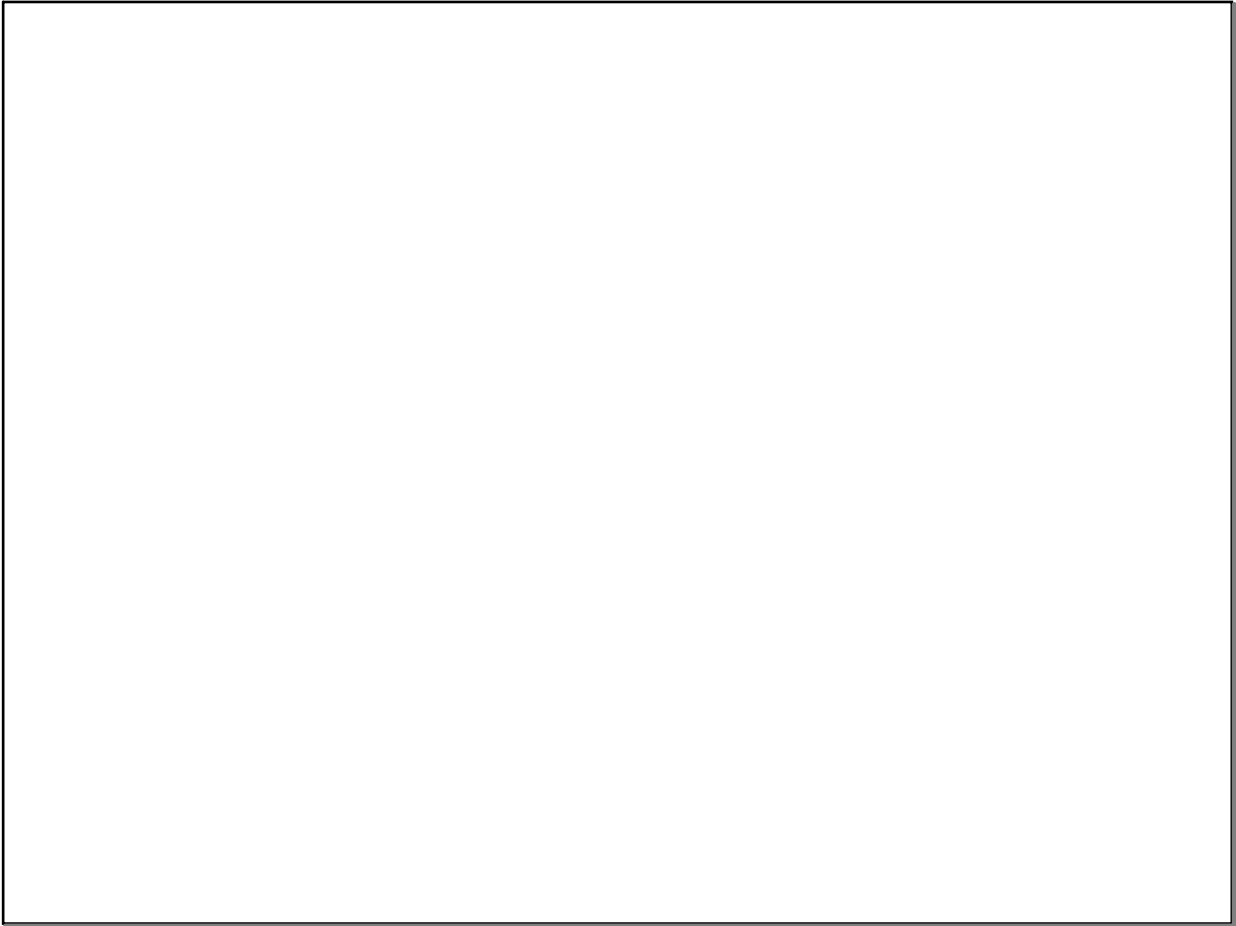
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## Solving Systems of Linear Inequalities

Write a system of inequalities that represents the shaded region.



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