

## Ready, Set, Go!



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## Ready

Topic: Solving two variable inequalities

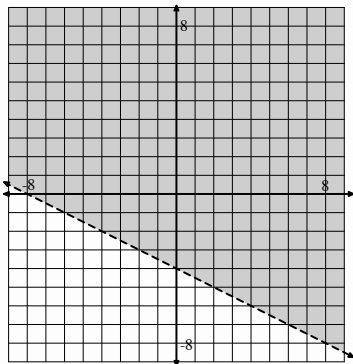
1. A theater wants to take in at least \$2000 for a certain matinee. Children's tickets cost \$5 each and adult tickets cost \$10 each.
  - a. Write an inequality describing the number of tickets that will allow the theater to meet their goal of \$2000.
  - b. If the theater has a maximum of 350 seats, write an inequality describing the number of both types of tickets the theater can sell.
  - c. Find the number of children and adult tickets that can be sold so that all seats are sold and the \$2000 goal is reached.

## Set

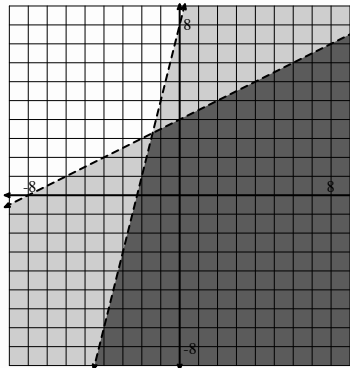
Topic: Writing equations of two variable inequalities

Given the graph with the regions that are shaded write the inequality or system of inequalities.

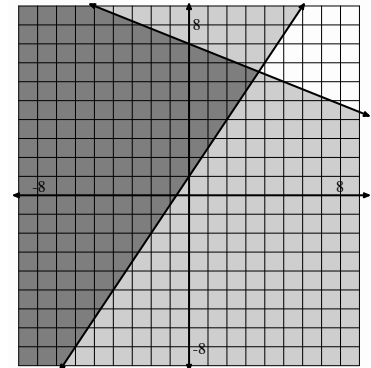
2.



3.



4.

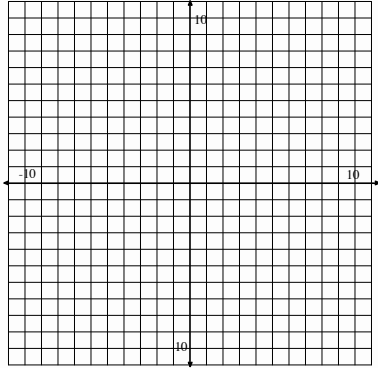


**Go**

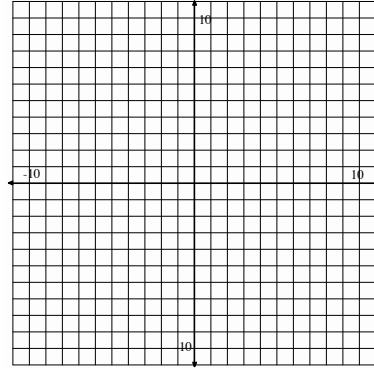
Topic: Graph two variable inequalities

**Graph each set of inequalities below. Include the shaded region of both, plus indicate the region that is true for all inequalities.**

$$5. \begin{cases} x - y < -6 \\ 2y \geq 3x + 18 \end{cases}$$



$$6. \begin{cases} 5x - y \geq 5 \\ 2y - x \geq -10 \end{cases}$$



**Solve the following systems of equations.**

7. Nadia and Peter visit the candy store. Nadia buys three candy bars and four fruit roll-ups for \$2.84. Peter also buys three candy bars, but can only afford one additional fruit roll-up. His purchase costs \$1.79. What is the cost of a candy bar and a fruit roll-up individually?

$$8. \begin{cases} 5x - 10y = 15 \\ 3x - 2y = 3 \end{cases}$$

$$9. \begin{cases} 5x - y = 10 \\ 3x - 2y = -1 \end{cases}$$

Need help? Check out these related videos.

<http://www.khanacademy.org/math/algebra/systems-of-eq-and-ineq/v/graphing-systems-of-inequalities-2>

