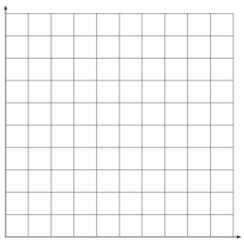
1.1 Practice B: Graphing Linear Inequalities in Standard Form

1. Members of the Anoka High School Ski Club went on a ski-trip where members can rent skis for $16 per day and snowboards for $20 per day. The club only brought $240.
   a. Find three possible combinations of skis and snowboards that would allow the Ski Club to spend exactly $240 and graph them on the coordinate grid.



   b. Explain the meaning of the *x*-intercept and the *y*-intercept.

   c. Describe what the graph would look like if you graphed all possible combinations of renting skis and snowboards that the club would be able to rent.

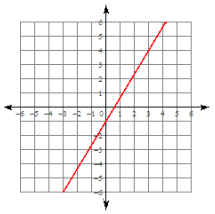
Determine whether each of the given points is a solution to the given linear inequality.

2. $-2x+y \geq 5$
   a. (2, 9)
   b. (0, 2)

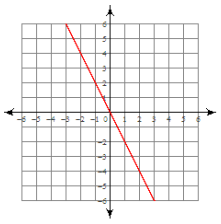
3. $3x-y<-4$
   a. (-1, 1)
   b. (0, 5)

For each inequality and graph, pick a point and use it to determine which half-plane should be shaded, then shade the correct half-plane.

4. $5x-3y \leq 3$

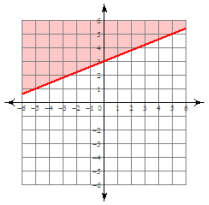


5. $2x+y \geq 0$

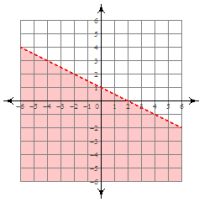


Fill in the blank with the appropriate inequality sign.

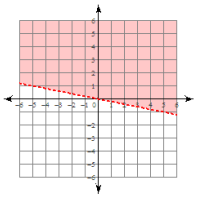
6. $-2x+5y$ ___ 15



7. $x+2y$ ___ 2



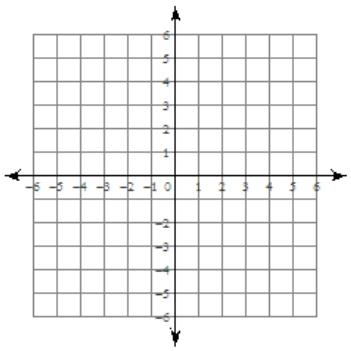
8. $x+y$ ___ 0



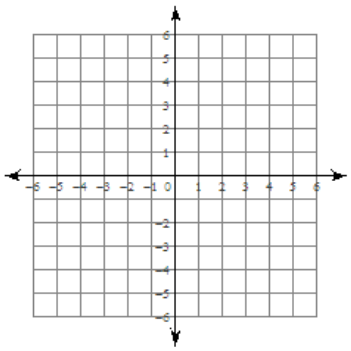
LT 1.1 I can demonstrate understanding of how to represent a region on a graph with an inequality.

Sketch the graph of each linear inequality.

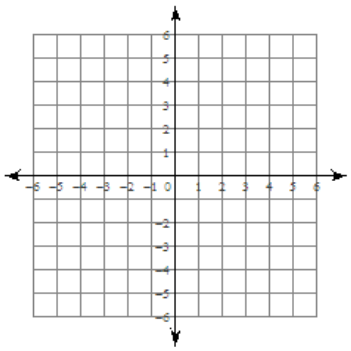
9. $x + 2y < -6$



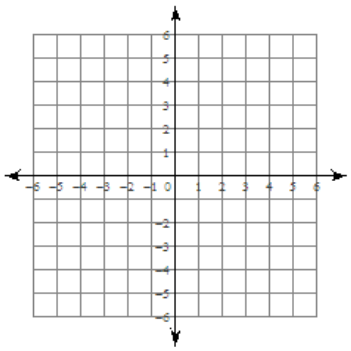
10. $x + y \geq -1$



11. $5x - 4y < -20$

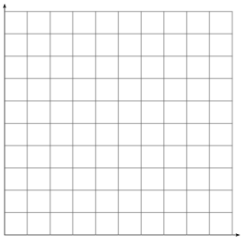


12. $2x + 3y \leq 6$



13. The Blaine High School theater department needs to sell $500 in tickets to its play to break even. Student tickets are $2 each and adult tickets are $5 each.

    a. Find three possible combinations of tickets sold that would allow them to break and graph them on the coordinate grid.



    b. Explain the meaning of the *x*-intercept and the *y*-intercept for this situation.

    c. Describe what the graph would look like if you graphed all the possible combinations of tickets sold that would allow them to make a profit.

    d. Write a linear inequality for part c.