

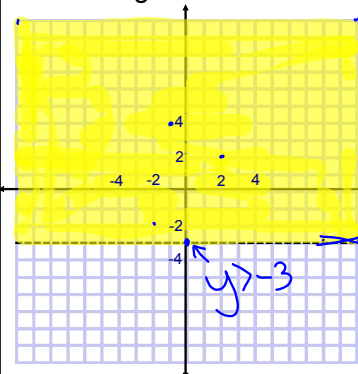
Section 6-5

Linear Inequalities

Students will be able to
 -graph linear inequalities in two variables
 -use linear inequalities when modeling real-world situations

Oct 30-4:59 PM

What are some of the coordinates of the shaded region of the following graph?



List of Coordinates:

$(-1, 1)$

All of the points that lie in the shaded region represent all of the ordered pairs that would make this inequality true.

What would be the inequality describing this graph?

Oct 30-5:17 PM

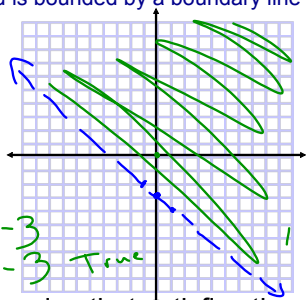
The solution to a linear inequality is a region of the coordinate plane that is shaded and is bounded by a boundary line that is either solid or dashed.

Graph:

$y > -x - 3$

Step 1:

Graph the boundary line.



$0 > -0 - 3$
 $0 > -3$ True

Step 2: Shade the region that satisfies the inequality.

-pick a point and test to see where to shade.

Oct 30-5:17 PM

Is the following a solution of $y \leq \frac{2}{3}x + 4$

$(3, 6)$ $6 \leq \frac{2}{3}(3) + 4$ $6 \leq 6$ True

$(8, 9)$ $9 \leq \frac{2}{3}(8) + 4$ True
 $9 \leq \frac{16}{3} + 4$ $9 \leq 9.\bar{3}$

Feb 18-8:57 AM

Two things to remember when working with inequalities:

1. Use a dashed line when it is $<$ and $>$ and a solid line for \leq and \geq
2. When you divide or multiply by a negative number, you must change the sign.

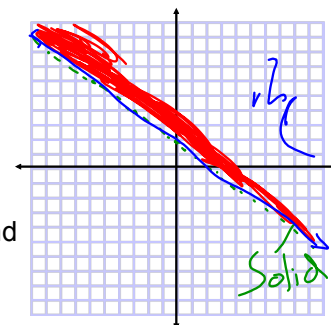
Oct 30-5:52 PM

Graph $2x + 3y \geq 6$

First solve for y.

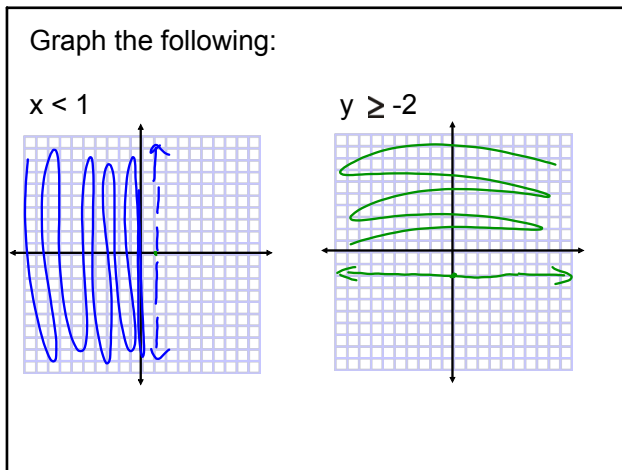
$y \geq -\frac{2}{3}x + 2$

Step 1: Graph boundary.

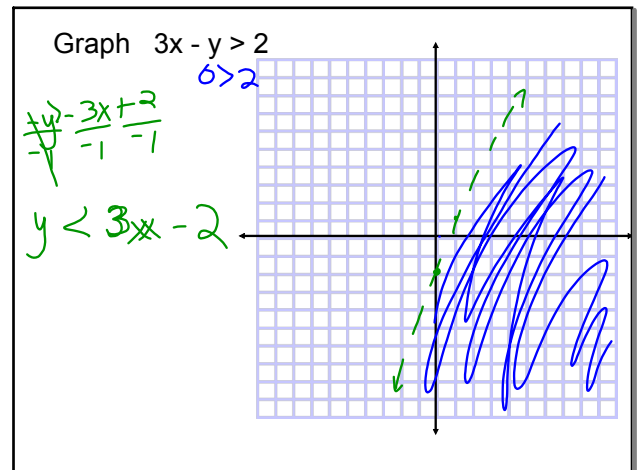


Step 2: Test to find where to shade.

Oct 30-5:17 PM



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Oct 30-5:51 PM

Suppose you can spend no more than \$20 for hot dogs and hamburgers for a picnic. Hot dogs cost \$5 per package and hamburgers cost \$8 per package. What are three possible combinations of packages you can buy?

Feb 18-9:02 AM

Homework:
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22-36(evens), 41

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