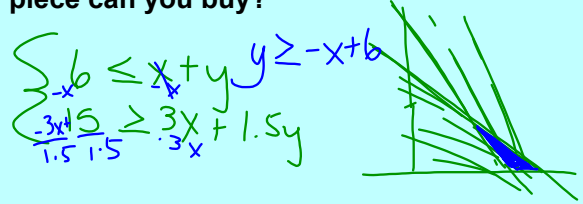Section 6.6
Systems of Linear
Inequalities

Feb 14-2:34 PM

You want to buy at least 6 new ring tones but you cannot spend more than $15. How many Premium ring tones, which cost $1.50 a piece, Top 10, which are $3 a piece can you buy?
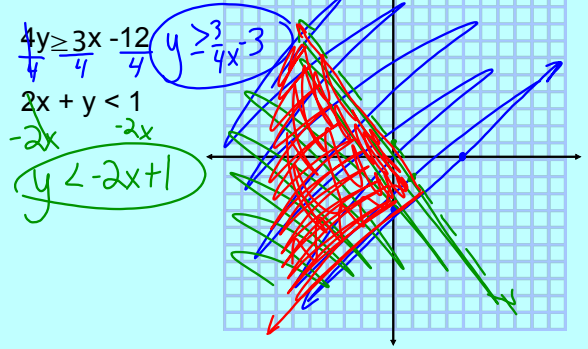

$6 \leq x + y$ $y \geq -x + 6$

$15 \geq 3x + 1.5y$

Feb 20-3:39 PM

The solution to a system of inequalities is the intersection of the solutions of each inequality. Every point in the intersection region satisfies the system.

We are going to graph each inequality and shade the region showing the solutions. The region where the two shadings overlap represents the solutions to the system.
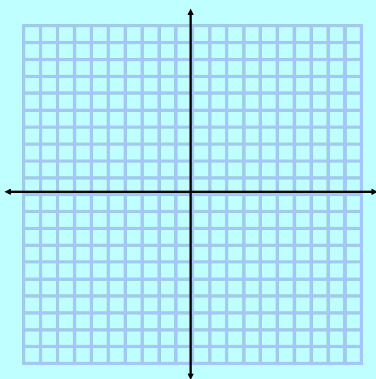
Feb 14-2:34 PM

Solve by graphing:

$4y \geq 3x - 12$ $\left(y \geq \dfrac{3}{4}x - 3\right)$

$2x + y < 1$

$-2x \qquad -2x$
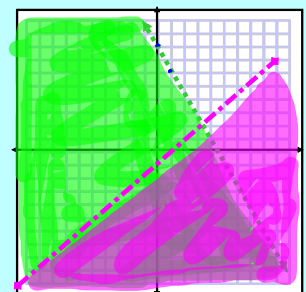
$\left(y < -2x + 1\right)$

Feb 14-2:34 PM

Solve:

$y < -4x + 7$
$y > -2x - 6$

Feb 14-2:34 PM

You can combine your knowledge of linear equations and inequalities to describe a graph using a system.

What is the system?

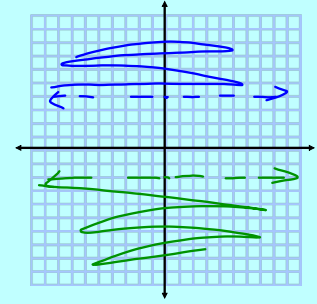pink $y < x - 1$
green $y < -2x + 8$

Feb 14-2:34 PM

You want to build a fence for a rectangular dog run. You want the run to be at least 10 ft. wide. The run can be at most 50 ft. long. You have 126 ft. of fencing. What is a graph that shows the possible dimensions of the dog fence?

Feb 14-2:34 PM

Solve:

y > 4
y < -2

Feb 21-10:50 AM

Hwk: pg.403 - 404 #8 - 26 evens, 29, 32, 34, 38

Feb 14-2:34 PM