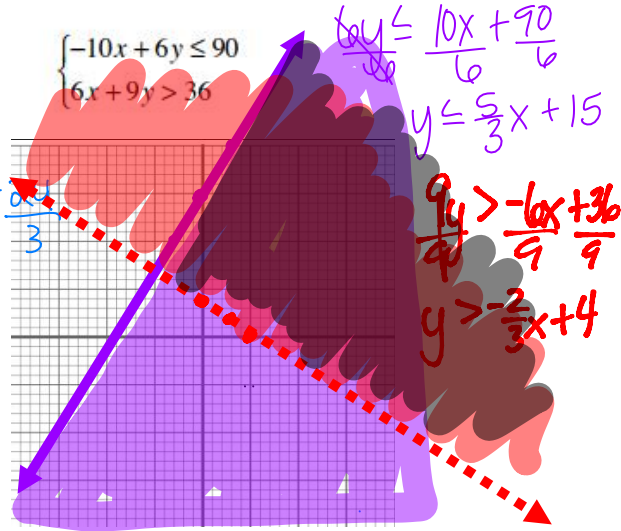
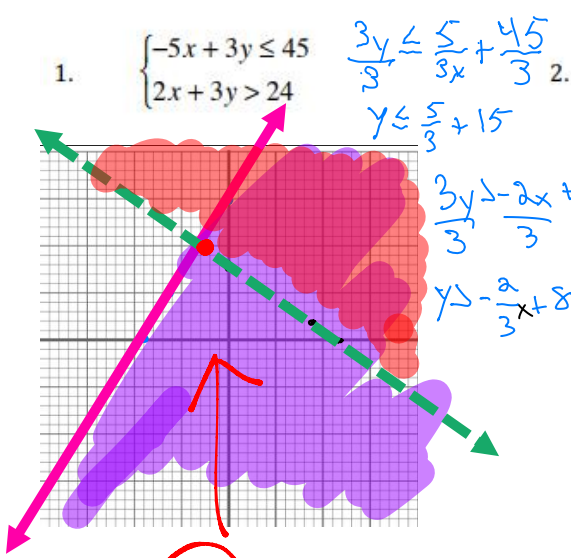


Solve the following systems of inequalities. SOLVE for x and y intercepts! Be sure you shade your answer!

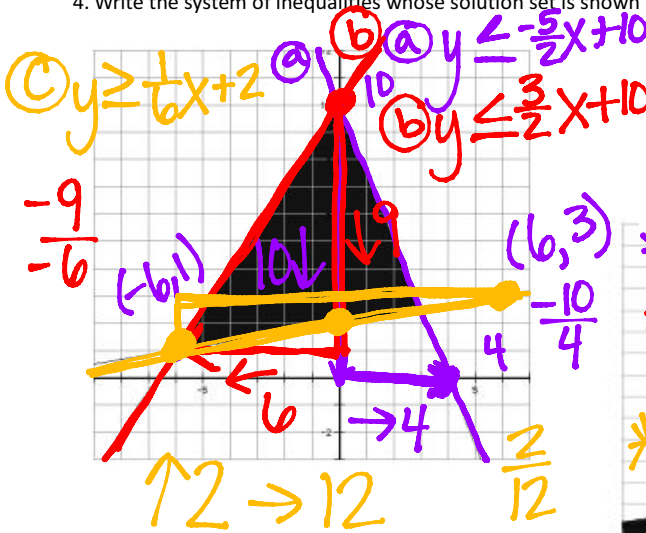


3. Is the point  $(-3, 10)$  a solution to the system in problem #1? Why or why not?

No, can't be on dashed  $\rightarrow$  not = to

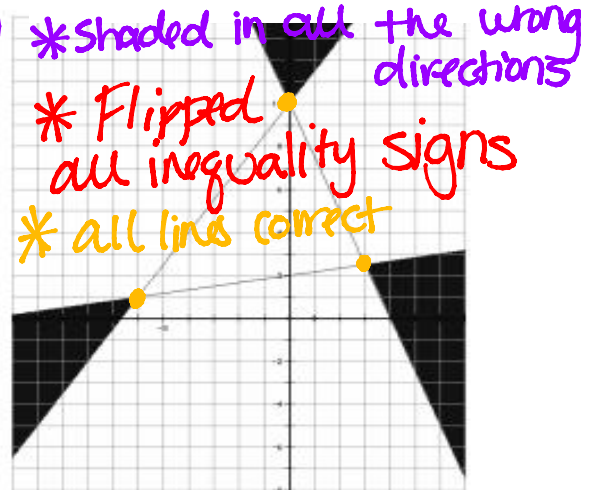
Plug in for x and y in case graph is no Buens

4. Write the system of inequalities whose solution set is shown below:



5. Amanda is examining Frank's work on #4, when she exclaims, "You have written all of your inequalities backwards. The solution set to your system would look like this."

What do you think about Amanda's statement.



Carlos and Carlita have found a cat food that seems to appeal to even the most finicky of cats, *Figaro Flakes*. They want to mix it with less expensive cat food, *Tabitha Tidbits*, to make an affordable, but tasty cat food.

$$x = TT$$

$$y = FF$$

Tabitha Tidbits contains 4 grams of protein and 6 grams of fat per scoop. Figaro Flakes contains 12 grams of protein and 4 grams of fat per scoop. Carlos wants to make a meal for cats that contain at least 24 grams of protein and no more than 12 grams of fat per scoop.

$$4x + 12y \geq 24$$

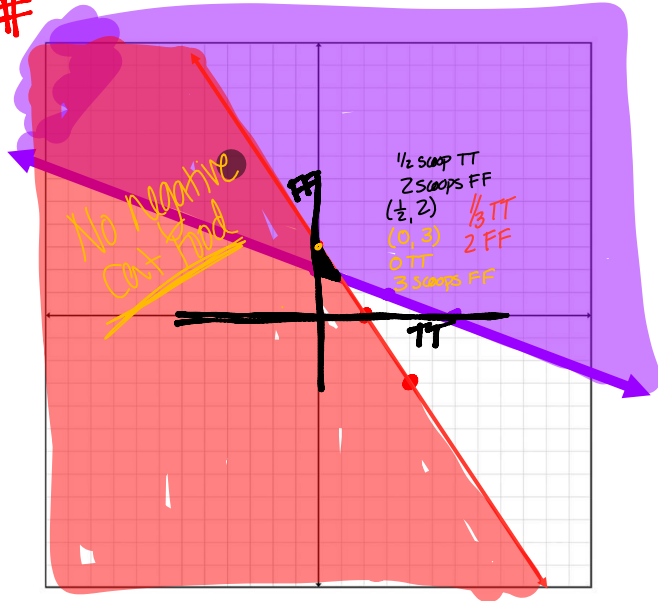
$$6x + 4y \leq 12$$

6. Write and solve a system of inequalities that Carlos can use to determine the possible combinations of Tabitha Tidbits and Figaro Flakes that will satisfy both of these constraints.

\*Watch for neg. #

$$y \geq -\frac{1}{3}x + 2$$

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



7. Based on your work, suggest at least 3 different “recipes” using each type of cat food that meets Carlos’ nutritional goals. For example, would 1 scoop of Tabitha Tidbits and  $\frac{1}{2}$  scoop of Figaro Flakes be an acceptable meal?