Algebra P3 Name:_____

HW #17

Systems of Equations Day 2

1. You want to buy some tacos and burritos for your Algebra P3 class. Burritos cost $3 each, and tacos cost $2 each. Everyone chipped in and you now have $60. Your job is to buy tacos and burritos for the class using all of the money you have.

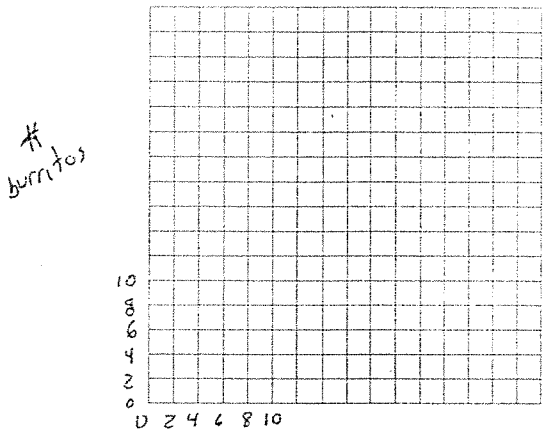
a) One combination of burritos and tacos that you could buy is 8 burritos and 18 tacos. Show that this combination costs $60.

b) Find 2 more combinations of tacos and burritos that spend all of your money. Show that they work below.

b) Graph all your solutions on the right (label the other axis). They must fit on your graph!!

c) Finish graphing the line (actually , you can't buy ½ a taco, but draw the line anyway).

d) Can you identify 2 more solutions from the line you made?



e) Write an equation for the graph you made (hint: what will x and y stand for? also, there should be a 60 in your equation, too). Then define your variables.

You suddenly remember that you have to feed 22 people in the class. Assume you buy one item for each person.

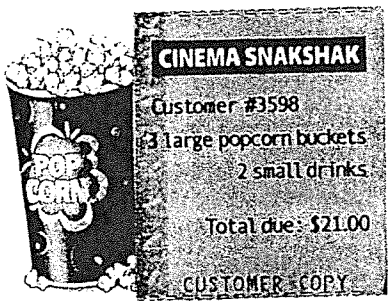
f) Give three "solutions" that feed 22 people (ignore the money for now).

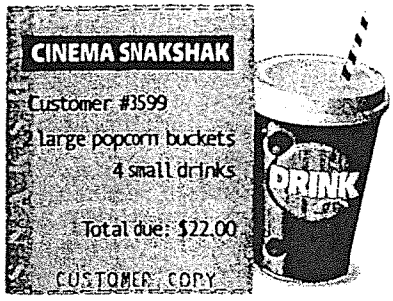
g) Graph the solutions on the same graph you made above. Then finish graphing the line.

h) Write an equation describing the graph you made. Make sure to define your variables.

i) Give a solution that satisfies **both** the money condition and the people condition (that *solves the system of equations*).

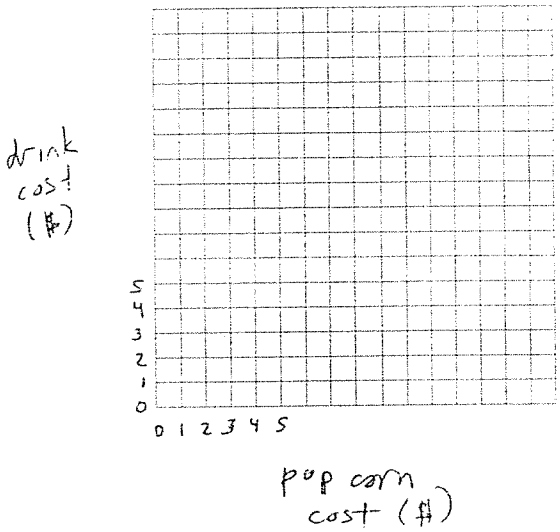
2. The situation below shows some purchases that customers made at a movie.





a. Write two equations that represent the two ticket sales. Then define your variables.

b. Find two solutions for the first equation.
Then graph them on the right.



c. Find two solutions for the second equation.
Then graph them on the same graph above.

d. Find the solution that gives the price of each popcorn bucket and each small drink.