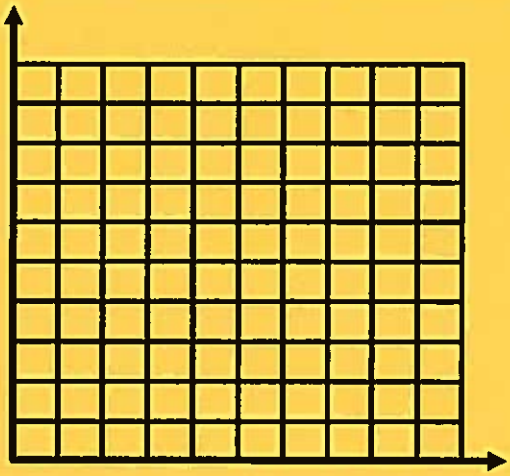
Name: _____

6.4
~~5.5~~ **Standard Form –Word Problems**

1. A snack mix requires a total of 120 ounces of some corn cereal and some wheat cereal. Corn cereal comes in 12 ounce boxes and the wheat cereal comes in 15 ounce boxes.

a) Define the variables you will use.

b) Write and graph an equation in standard form that models that possible combinations of boxes of wheat and corn cereal you can use.



c) How many boxes of corn cereal do you need for your snack mix if you have 4 boxes of wheat cereal?

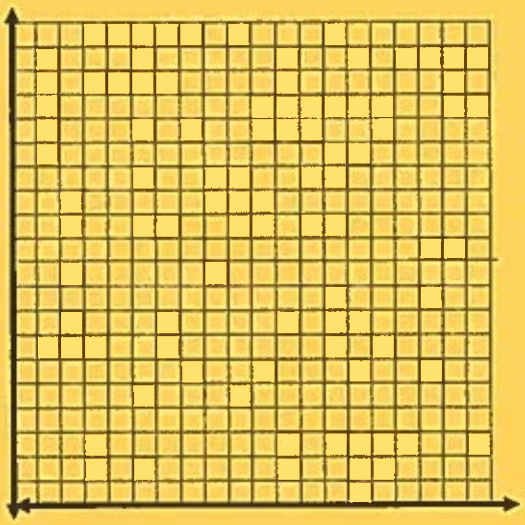
d) List 3 other combinations of boxes of wheat and corn cereal you can use to make the same mix?

2. As the student council treasurer, you prepare the budget for your class rafting trip. Each large raft costs $100 to rent, and each small raft costs $40 to rent. You have a total of $1600 to spend.

a) Define the variables.

b) Write an equation in standard form that models the possible combinations of small rafts and large rafts that you can rent.

c) Draw and graph the equation you wrote in part (b). [You must find the x-intercept (set y=0) and find the y-intercept (set x=0) in order to graph this!!]

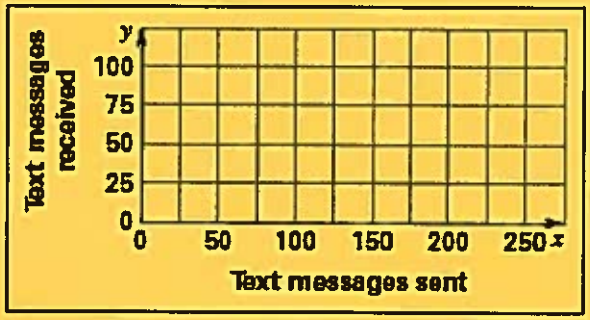


d) List 3 other combinations of small and large rafts that you can rent with the amount of money you have. Notice – you can visually see these combinations on your graph in part (c).

3. Your cell phone plan charges you $.02 to send a text message and $.07 to receive a text message. You plan to spend no more than $5 a month on text messaging.

a) Write an equation in standard form that models the possible combinations of sent and received text messages.

b) Graph the equation from part (a). Explain what the intercepts of the graph mean in this situation.

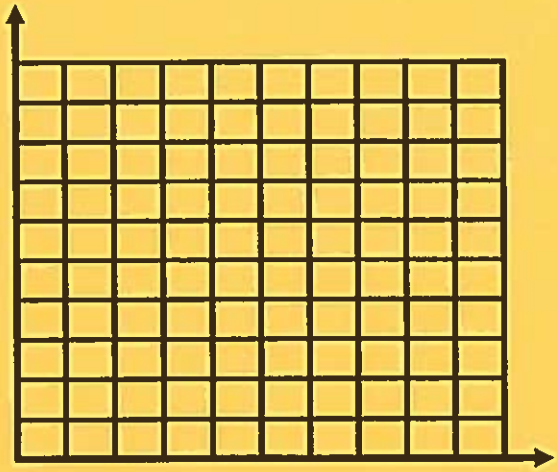


c) List three other possible combinations of the number of messages you can send and receive.

4. You are making 24 pounds of your own potting soil mix of sphagnum peat moss and coarse sand. You buy the peat moss in bags that weigh approximately 2 pounds.

a) Last time you made this potting soil, you used 9 bags of sphagnum peat moss and 4 bags of course sand. Use this information to find the number of total pounds in a bag of course sand.

b) Write an equation in standard form that models all possible combinations of bags of sphagnum peat moss and coarse sand you can use. And graph the equation.



c) List three other possible combinations of whole bags of sphagnum peat moss and coarse sand you can use to make the potting soil.