Worksheet: Using tables   **Name**_____
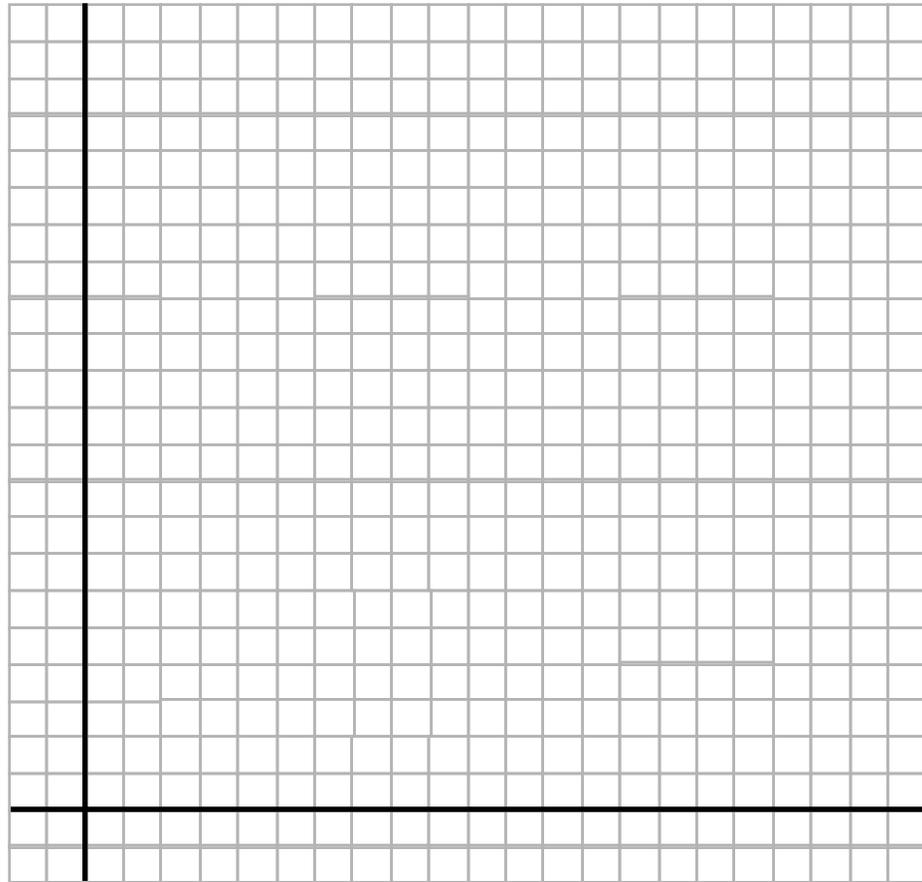
For the following problem, 1) write an equation, 2) define (describe) the variables, 3) make a table, 4) construct and label a graph, and 5) answer the questions using your results.

Creative Catering charges a basic fee of $100 to cater a banquet plus an additional charge of $2 per person invited to the banquet.

1) Write an equation to determine the total fee:_____
2) Define the variables:

    x = _____

    y = _____

3) Make a table and complete it: 4) Graph and connect the points. Choose an appropriate location and scale for your axes.

x	y
50	
42	
25	
10	
0	

5) Answer the following questions:
   a) How would you describe your graph?_____
   b) Where does the graph intersect the y-axis?_____
   c) Where does the graph intersect the x-axis?_____
   d) What would the value of y be if

        x = 40?_____

        x = -10?_____

   e) What would the value of x be if

        y = 10?_____

        y = 120?_____

   f) Write an equation that states that y = 240. Solve this equation to find x.

   g) Find the value of y if x = 54.

   h) What would be unreasonable data for this problem?

You are selling foot-long hot dogs for $2.50. You had to spend $150 to invest in a hot dog cart.

1) Write an equation to determine the amount of profit or loss:_____
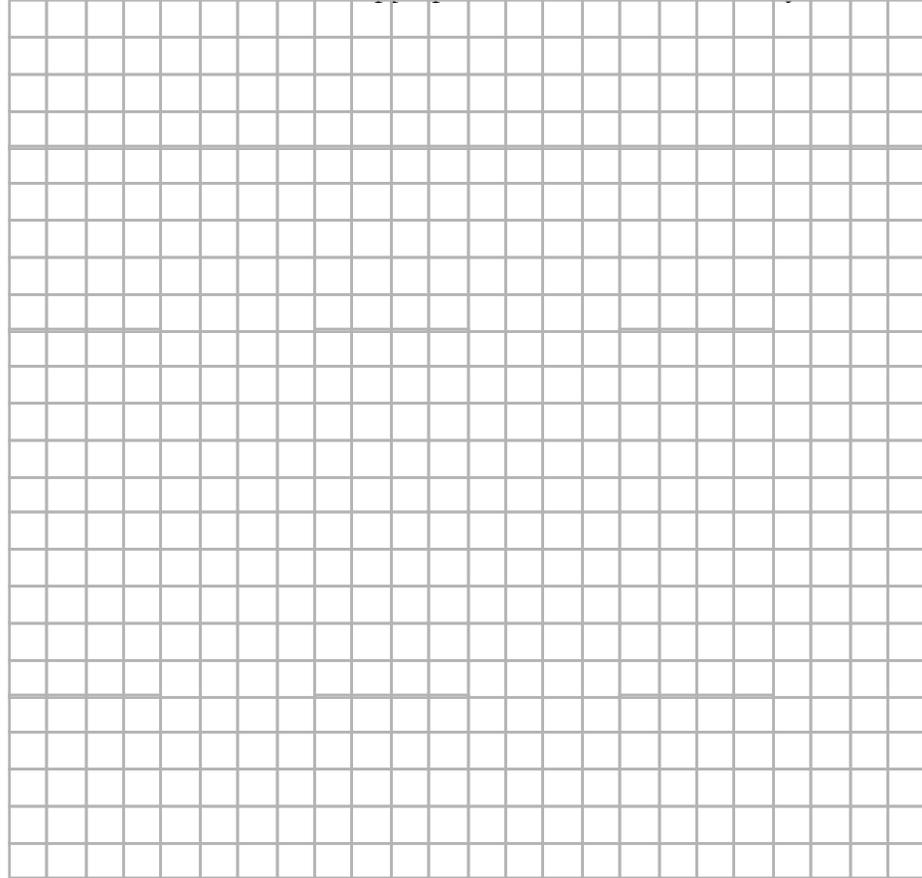2) Define the variables:

     x = _____

     y = _____

3) Make a table and complete it: 4) Graph and connect the points. Choose an appropriate location and scale for your axes.

x	y
0	
20	
50	
80	
100	

5) Answer the following questions:

   a) How would you describe your graph?_____

   b) Where does the graph intersect the y-axis?_____

   c) Where does the graph intersect the x-axis?_____

   d) What would the value of y be if

        x = 100?_____

        x = -20?_____

   e) What would the value of x be if

        y = 105?_____

        y = -50?_____

   f) Write an equation that states that y = 380. Solve this equation to find x.

   g) Find the value of y if x = 116.

   h) What values of x would not make sense in this problem?