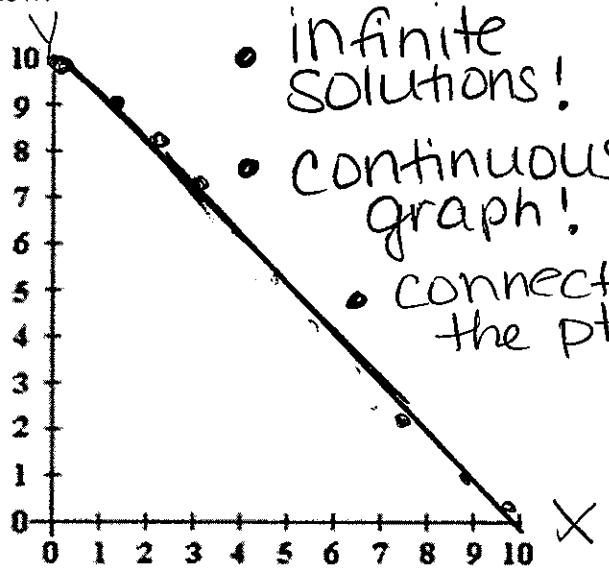
Name _____ Date _____

Unit 3 **Lesson 2**

Do Now: Think of two numbers whose sum is 10. Write your answers as pairs of coordinates. Graph your results below:



- infinite solutions!
- continuous graph!
- connect the pts!

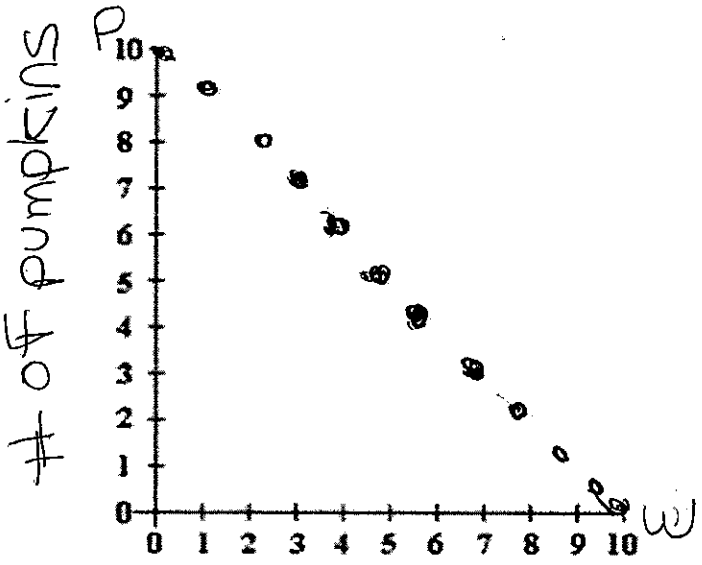
X	Y
(0,	10)
(1,	9)
(2,	8)
(3,	7)
(4,	6)
(5,	5)
(6,	4) *
(7,	3)
(8,	2)
(9,	1)
(10,	0)

decimals (5.5, 4.5) (1.8, 8.2)

$x + y = 10$

AIM: GRAPHING LINEAR EQUATIONS TO DETERMINE THE SOLUTION SET

1. There is enough space in your garden to plant ten plants. You want to plant watermelons & pumpkins. List the possible combinations of the number of watermelons and pumpkins you could plant. Graph the results of the possible combinations of plants.

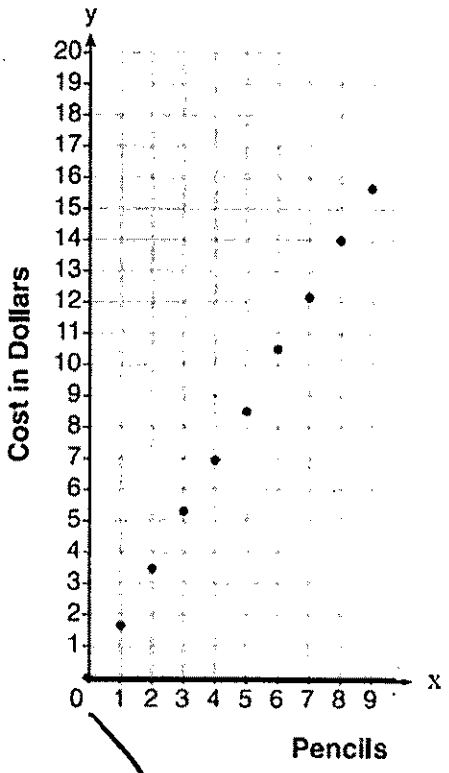


W	P
0	10
1	9
2	8
3	7
4	6
5	5
6	4
7	3
8	2
9	1
10	0

- finite solutions (only whole #'s)
- do not connect the pts
- discrete

$w + p = 10$

2. Given the graph to the right:
Is the graph *discrete* or *continuous?* Explain your answer.



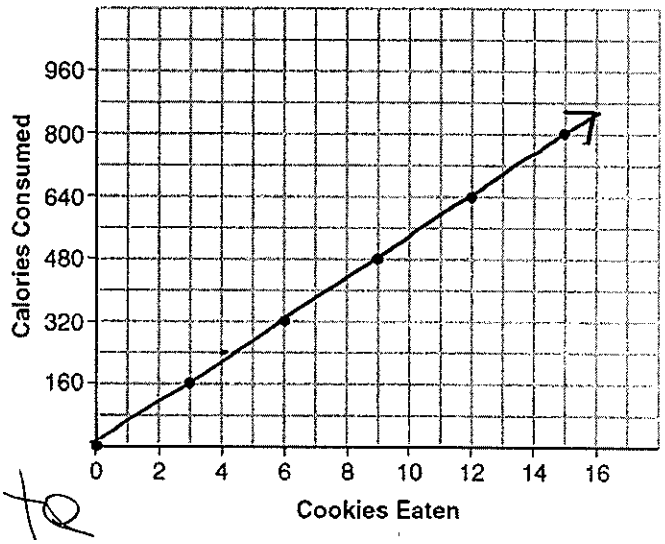
the graph is discrete. You may not draw a line through the points b/c the only solutions must be whole numbers. You can not buy a half of a pencil.

(finite solutions)

3. Samantha purchases a package of sugar cookies. The nutrition label states that each serving size of 3 cookies contains 160 Calories. Samantha creates the graph below showing the number of cookies eaten and the number of Calories consumed.

(a) Explain why it is appropriate for Samantha to draw a line through the points on the graph.

the solutions can be decimals. you can eat a piece of a cookie



(b) How many possible solutions can be graph?

You will have infinite solutions

(c) Is the graph *discrete* or *continuous?* Explain your answer.

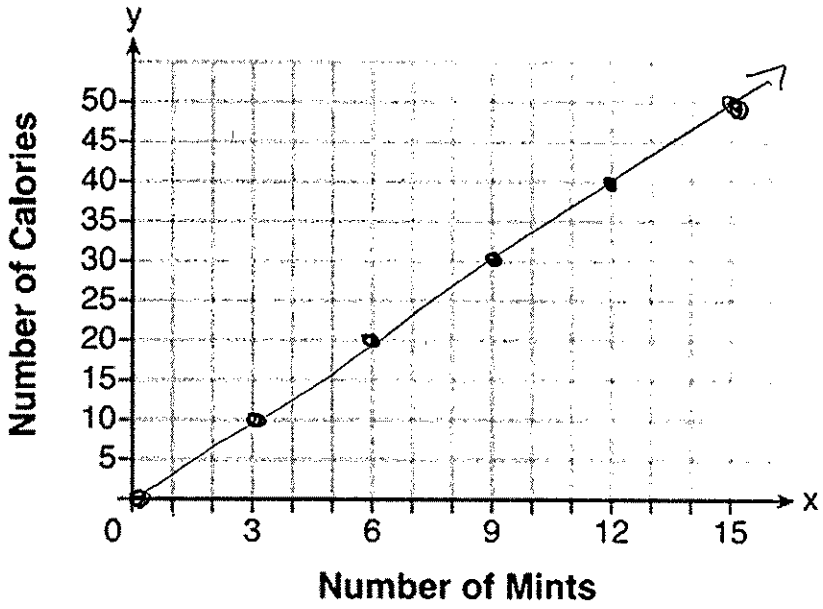
continuos b/c you can connect the points & there are infinite solutions

4. Max purchased a box of green tea mints. The nutrition label on the box stated that a serving of three mints contains a total of 10 Calories.

(a) On the axes below, graph all of the possible solutions to represents the number of Calories in x mints.

X	Y
3	10
6	20
9	30
12	40
15	50

*1.5 15



(b) How many possible solutions can be graph?

Infinite

(c) Is the graph *discrete* or *continuous?* Explain your answer.

continuous b/c you can connect the points.