Discrete vs. Continuous

For word problems

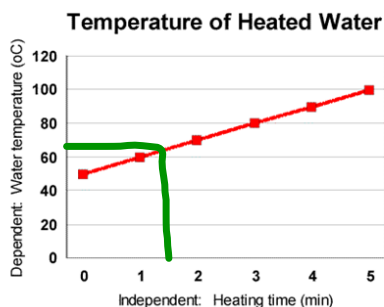**Discrete** means you do not connect the dots (since you can not have part of your x variable)

ex) Graphing how many people attended a dance. (Can't have half a person)

fix
↓

Continuous means you connect the dots (since you can not have part of your x variable)

ex 1) Graphing how many hours. (Can have half a hour)

ex 2)

Temperature of Heated Water

The cost of making the local corn maze is $300. Jim makes a $5 profit for each person that joins. An equation for the relation is P=5n-300, where n represents the number of people attending in one week, and P represents his weekly profit in dollars.

a) Create a table of values for the relations.

Use the values n: 0, 10, 20, 30, 40, 50, 60, 70, 80

$$P = 5n - 300$$

Show work for

n=0	n= 10	n= 20
$P = 5n-300$	$P = 5n-300$	$P = 5n-300$
$= 5(0) -300$	$P = 5(10)-300$	$= 5(20)-300$
$= 0 - 300$	$= 50 - 300$	$= 100 - 300$
$P = -300$	$= -250$	$= -200$

x n	y P
0	-300
10	-250
20	-200
30	-150
40	-100
50	-50
60	0
70	50
80	100

$+50

b) Use grid paper and label the x, y axis, provide a title of a graph and axis. GRAPH the data

Don't connect Dots

→ Cannot have part of a person

Corn Maze

Profit ($)

# of people (n)
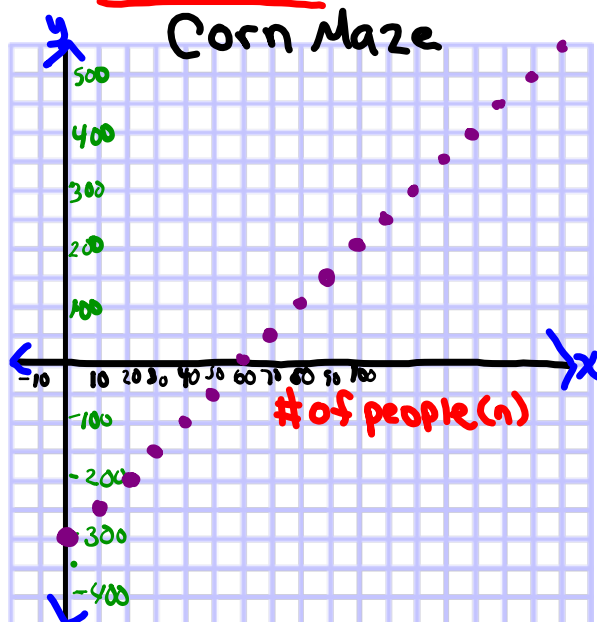
c) What do negative values of P represent? OWE money
or
In the whole

d) Do we connect the dots? Why or why not? (No)
See first page

e) One week Jim had (150 people.) How much profit did he make?

Show work
$$P = 5n - 300$$
$$= 5(150) - 300$$
$$= 750 - 300$$
$$= \$450$$

He made $450 profit if 150 people attend.

f) IF he made a profit of $725, then how many people attended the corn maze.
Show work

$$P = 5n - 300$$
$$\$725 = 5n - 300$$
$$725^{+300} = 5n - 300 + 300$$
$$1025 = 5n$$
$$\frac{1025}{5} = \frac{5n}{5}$$
$$\boxed{205 = n}$$

205 people
of $725.   must attend in order to make a profit

Class/Homework

Today Oct.21

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graph   graph   Read graph   Solve homework   graph

4, #5(a, d, e, g), #6(a, b, c, d), #7, #8, #9, #10

5a) y=2x

X	y
0	
1	
2	
3	
4	
5	

Part 2 Test Wednesday Oct 23