Warm Up
Day 2

Create a table of values for the equation: $y = 3x + 8$

x	y
-2	2
-1	5
0	8
1	11
2	14

$y = 3x + 8$

$y = 3(-2) + 8$)+3

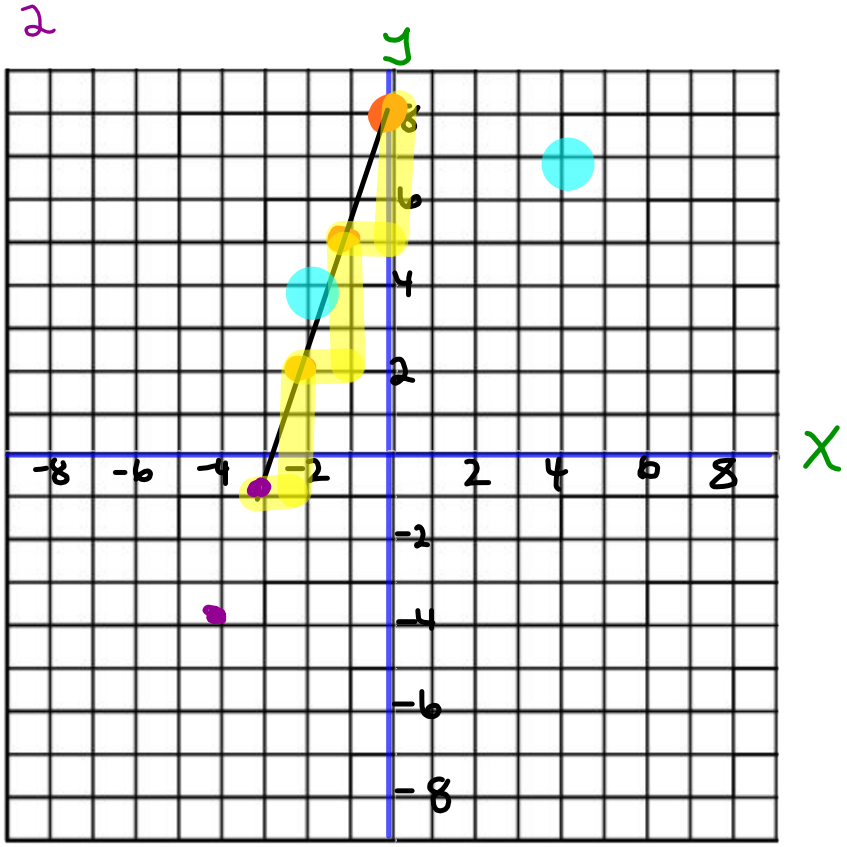
$y = -6 + 8$)+3

$y = 2$)+3)+3

$y = 3(-1) + 8$

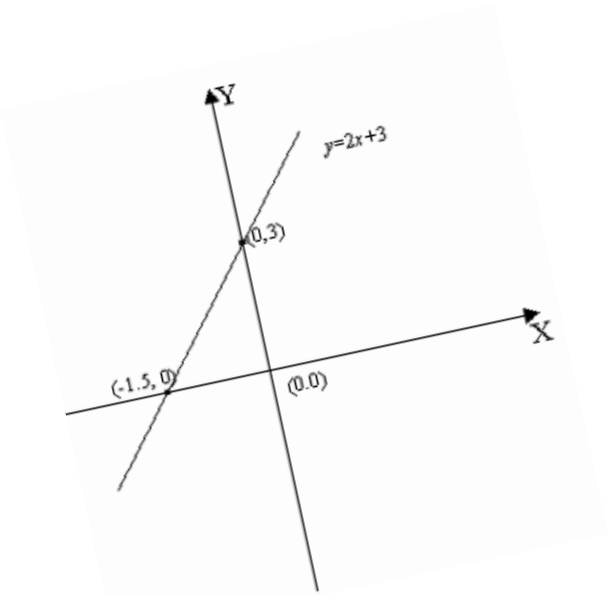
$y = -3 + 8$

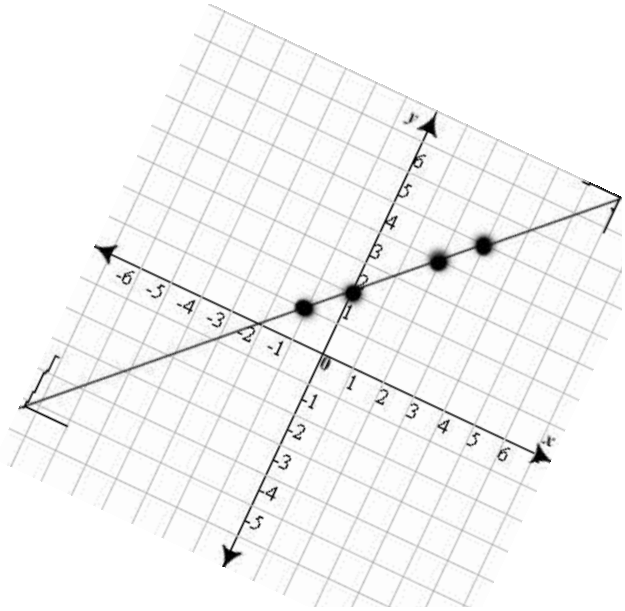
$y = 5$



Section 4.2

Linear Relations





Concrete vs. Discrete

Discrete : Unconnected

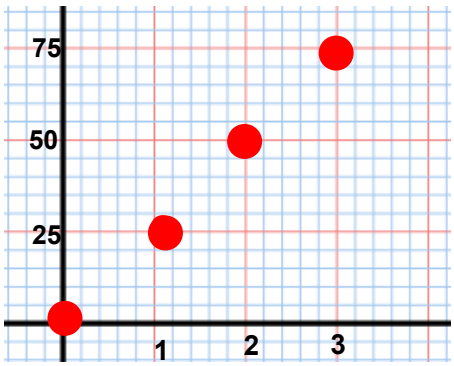
Continuous: Connected

Cost of video games

X Number of Video games	Cost, C($)
1	25
1.5 (No)	
2	50
3	75

Can you buy 1.5 video games?

So would you connect the dots???

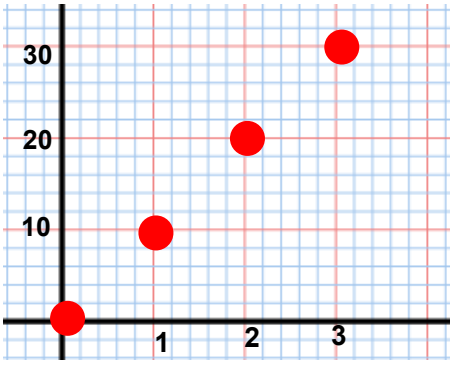


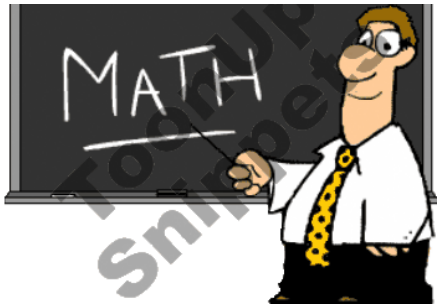
Babysitting Job

X Number of Hours	Earnings, C($)
1	10
1.5 (yes	
2	20
3	30

Can you work 1.5 hours?

So would you connect the dots???





A relationship has the equation: $y = 7-2x$

$y = \frac{-2x}{1} + 7$

a) Create a table of values for the relation for values -2 to 2.

x	y
-2	11
-1	9
0	7
1	5
2	3

We have to do some work!

for x = -2

$y = 7 - 2x$

$y = 7 - 2(-2)$

$y = 7 + 4$

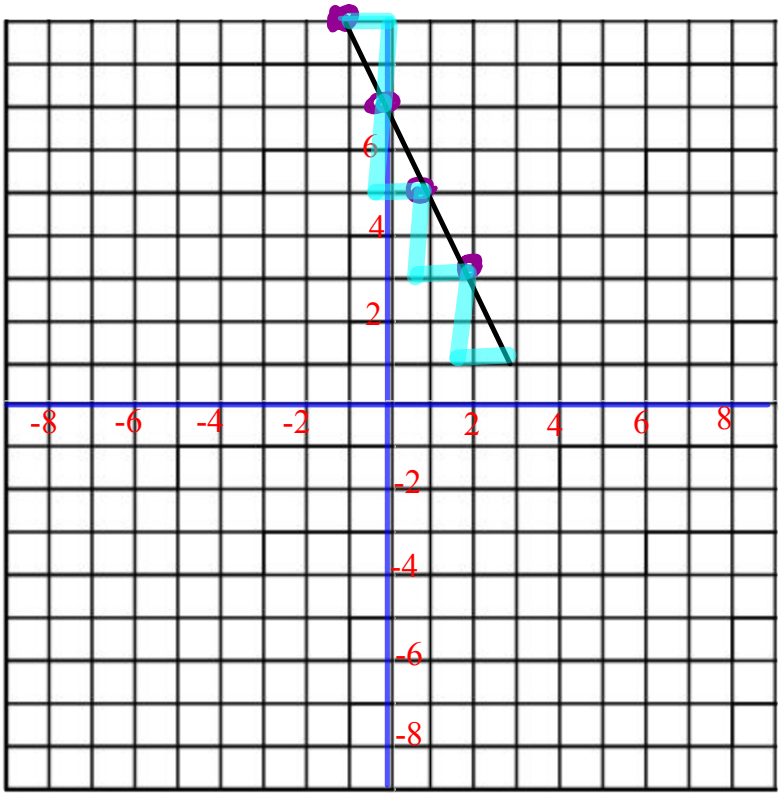
$y = 11$

$y = 7 - 2x$

$y = 7 - 2(-1)$

$y = 7 + 2$

$y = 9$



Choose Numbers that are easy to work with

$y = \frac{\Delta y}{\Delta x} x \pm \#$

$y = \frac{2}{3} x + 1$

$y = \frac{2}{3}(-3) + 1$

$y = -2 + 1$

$y = -1$

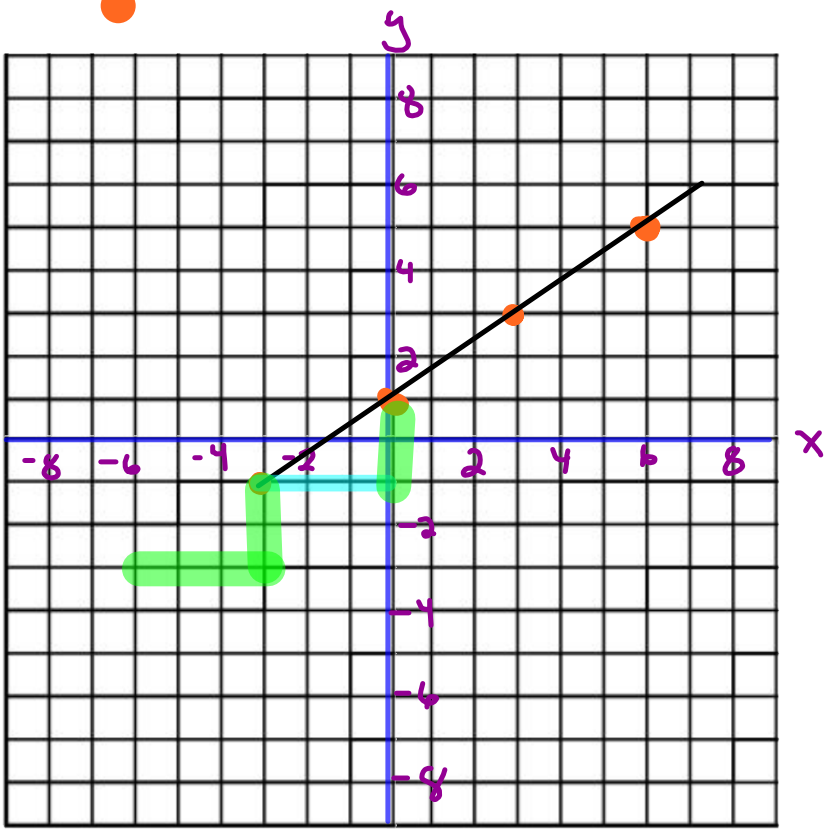
$y = \frac{2}{3}(0) + 1$

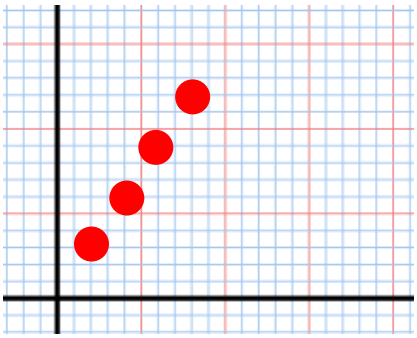
$y = 0 + 1$

$y = 1$

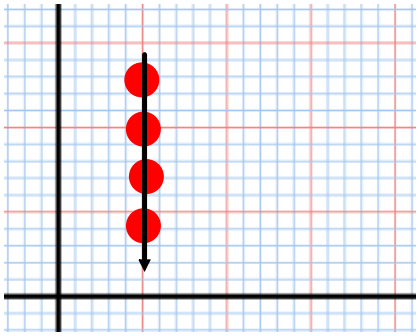
$\Delta x = 3$ $\Delta y = 2$

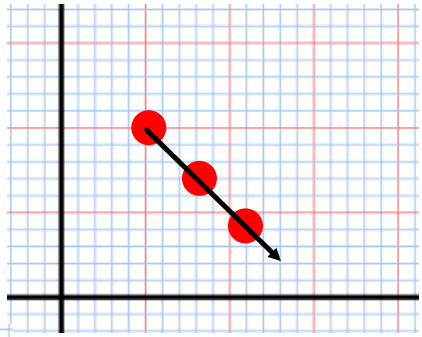
x	y	
−3	-1	)+2
0	1	)+2
3	3	)+2
6	5	

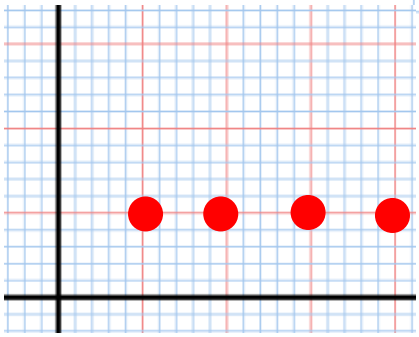


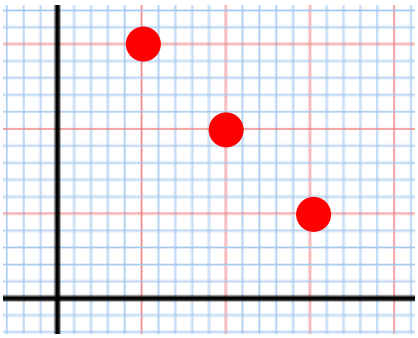


Discrete
or
Continuous??









Example: Please turn to page 164 in *MMS9*.

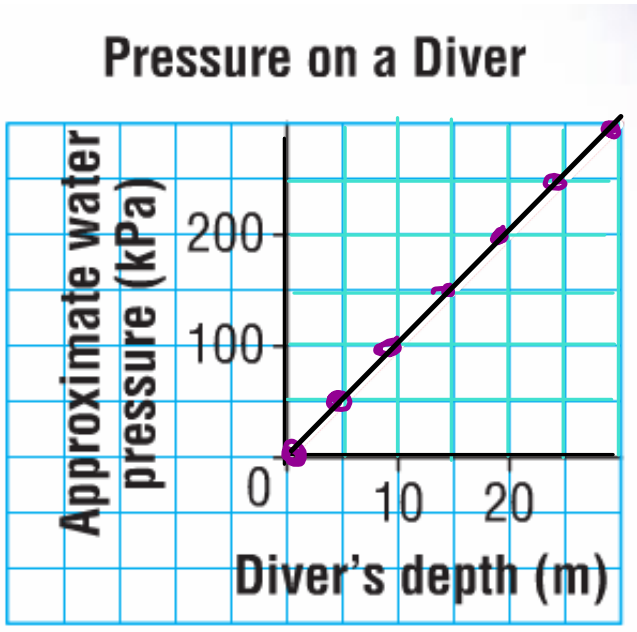
When a scuba diver goes under water, the weight of the water exerts pressure on the diver.

Diver's Depth (m)	Approximate Water Pressure (kiloPascals)
0	0
5	50
10	100
15	150
20	200

x y

(10)

+5 +50 +5 +50 +5 +50 +5 +50



$y = \frac{\Delta y}{\Delta x} x \pm \#$

What pattern do you see in the table?

$y = \frac{50}{5} x \pm \#$

$y = 10x$

What pattern do you see in the graph?

$y = \frac{1}{2}x + 3$

$y = \frac{\Delta y}{\Delta x} x \pm \#$

$y = \frac{1}{2}(-2) + 3$

$y = -1 + 3$

$y = 2$

$y = \frac{1}{2}(0) + 3$

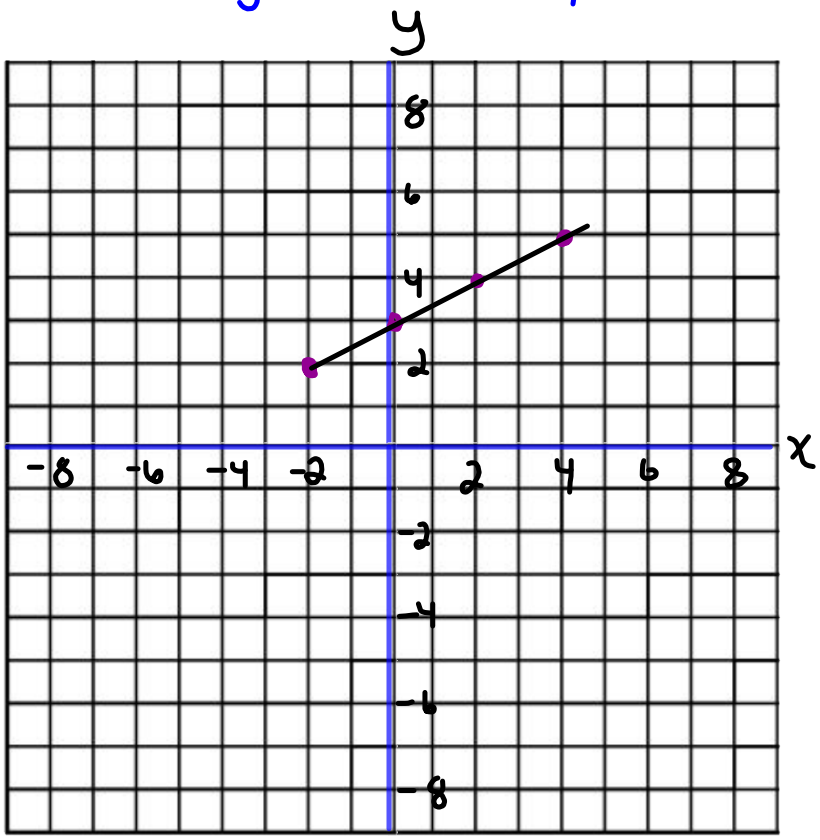
$y = 0 + 3$

$y = 3$

$\Delta x = 2$ $\Delta y = 1$

x	y
-2	2
0	3
2	4
4	5

$+2$ $+1$



5

A photographer charges a sitting fee of $10 and $5 for every photograph ordered.

Equation

goes with variable

C = # p + #

1. How many photographs could you get for $35?

T = 5p + 10

35 = 5p + 10

-10 -10

25 = 5p

5 = p

2. How much would it cost for 8 photographs?

T = 5p + 10

T = 5(8) + 10

T = 40 + 10

T = 50

Class/Homework

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7 d,
8

9 a,c

#10 c,e

#11,

14