Ch2 test topic 1. Given a linear table in a situation come up with:

1) with the linear equation.

2) Identify the variables with let statement and know which is the independent and dependent variable

3) Identify the rate of change and the start value.

4) use your equation, given an x value find the y value.

5) use your equation, given an y value find the x value

Oct 30-11:55 AM

Example

The table shows a pans water level depending on the number of eggs in it.

#eggs	water level		#eggs	water level
0		you	0	99 mm
1		would	1	108mm
2	117 mm	finish	2	117 mm
3	126 mm	table	3	126 mm
4	135 mm		4	135 mm
5			5	144 mm

From the table you would identify a start value b. (b=99) and a rate of change m. (m=9mm)

Identify independent variable (x). (# eggs)

Identify dependent variable (y) . (water level)

Write equation Y= 9x + 99

Given an x value find y. If 10 eggs x=10, find water level (y)

y=9x + 99 becomes y = 9(10) + 99, y = 189

Given a y value find x, if the water level is 279mm, find the number of eggs

y=9x + 99 becomes 279 = 9x + 99, solve for x.

Oct 30-11:55 AM

Ch2 part 2. Use the standard form of a linear equation ax + bx = c to: 1)quickly graph, 2) find slope, x-intercept, and y-intercept from your graph. 3) Identify your independent variable on the x-axis, and your dependant variable on the y-axis.

example

Given 3x + y = 120 represents money under a mattress. plot the line on the graph and explain the intercepts.

Use algebra and equation to finish table.

x	y
0	
	0

3(x) + y = 120
3(0) + y = 120
y = 120

x	y
0	120
	0

3(x) + y =120
3(x) + 0 =120
$\frac{3(x)}{3} = \frac{120}{3}$
x=40

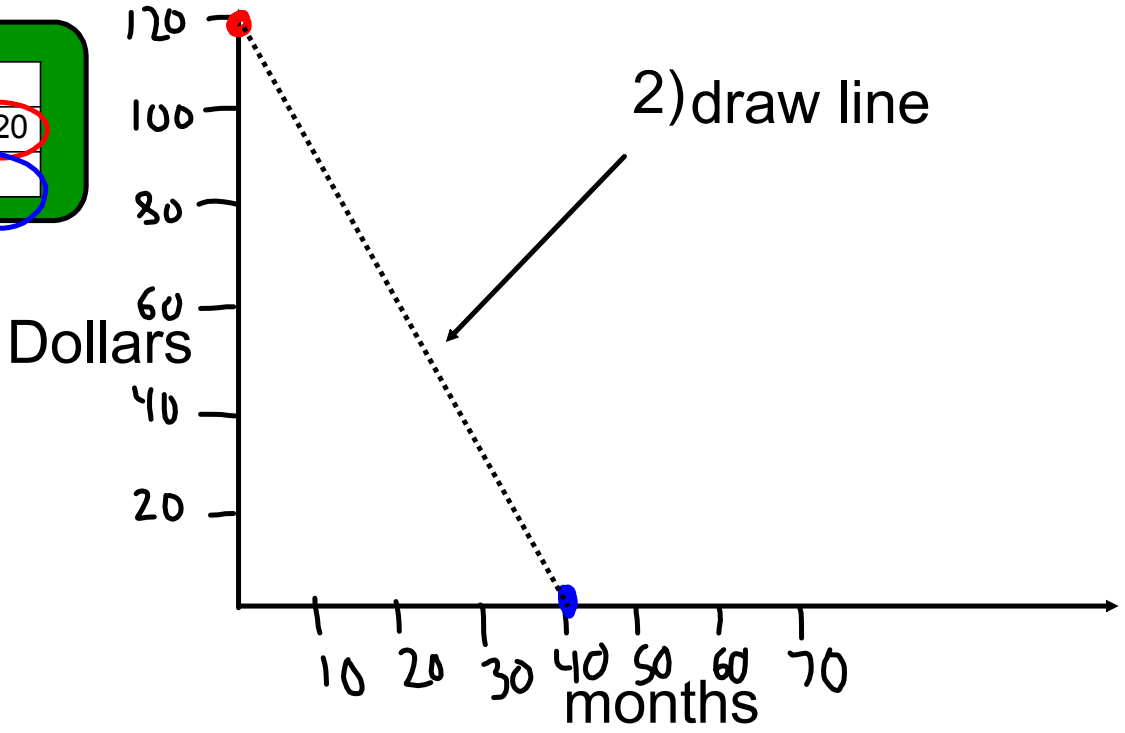
x	y
0	120
40	0

This table is your intercepts.

Oct 30-12:16 PM

1) Plot your intercepts

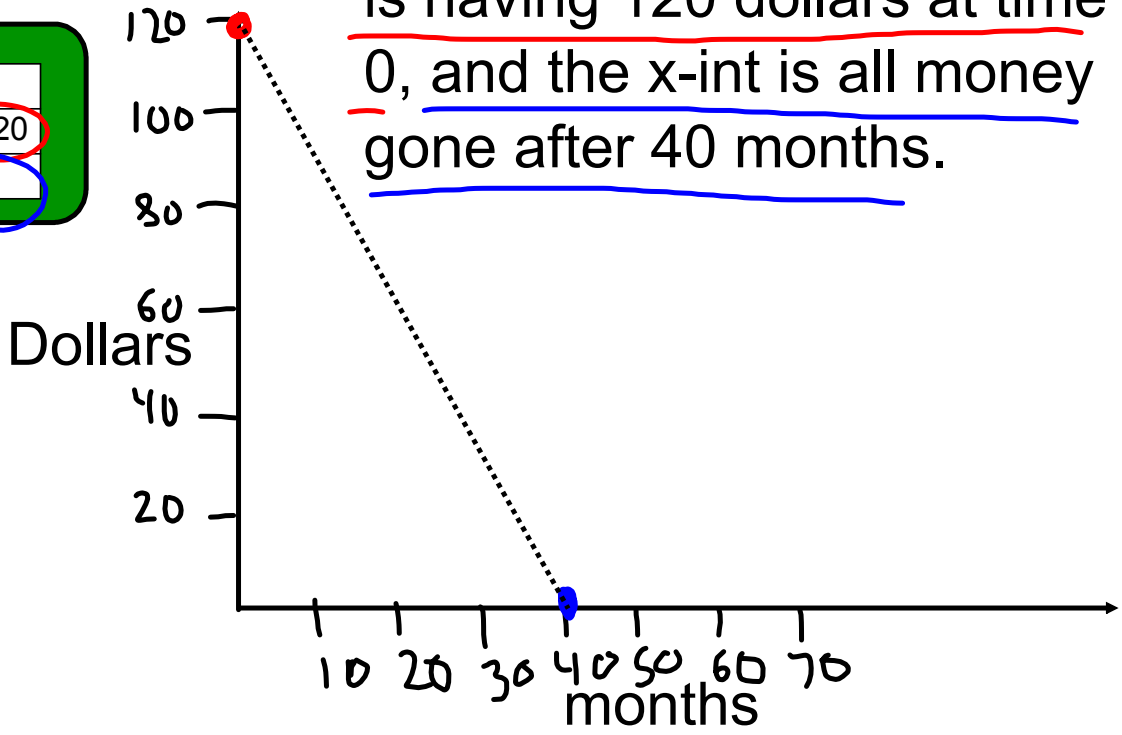
x	y
0	120
40	0



Oct 30-12:42 PM

x	y
0	120
4	0

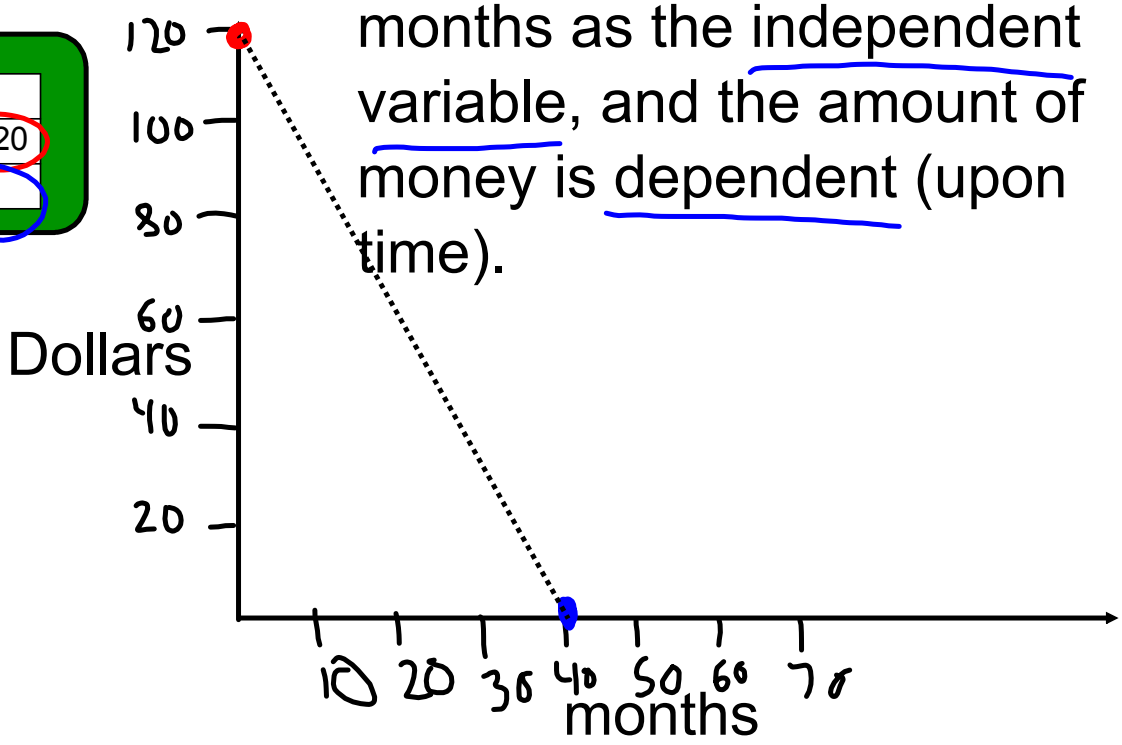
3) Describer intercepts. y-int is having 120 dollars at time 0, and the x-int is all money gone after 40 months.



Oct 30-12:42 PM

4) describe the time in months as the independent variable, and the amount of money is dependent (upon time).

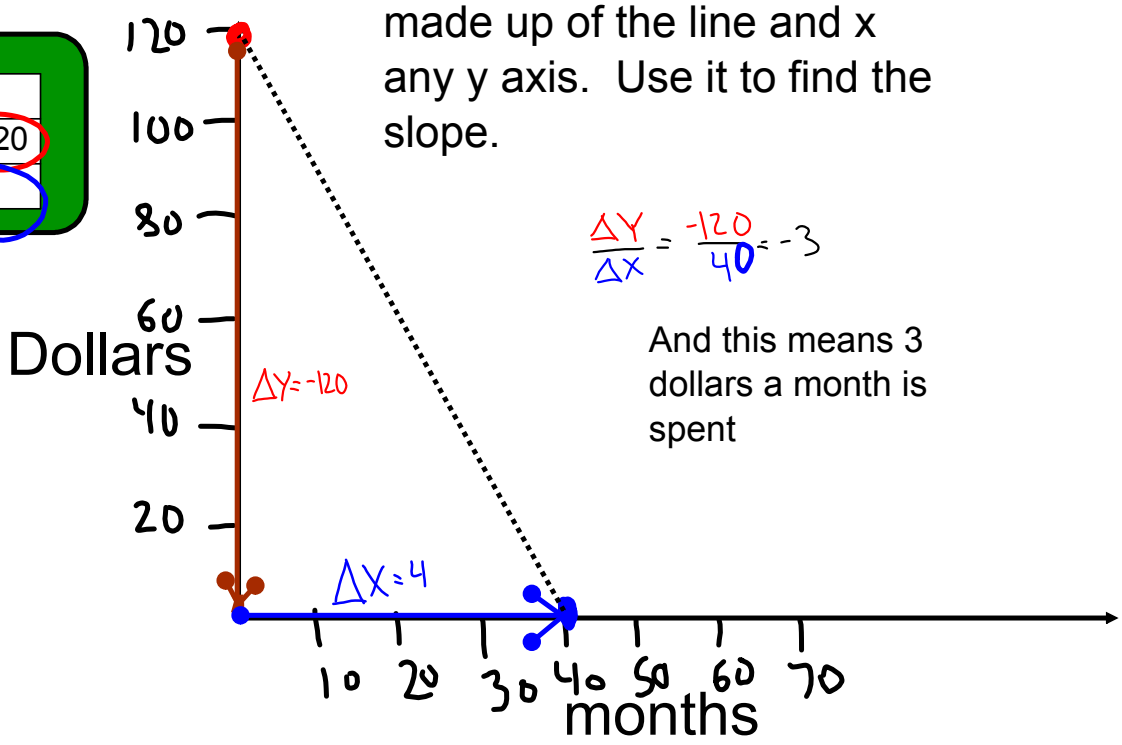
x	y
0	120
4	0



Oct 30-12:42 PM

x	y
0	120
4	0

5) do you see the triangle made up of the line and x any y axis. Use it to find the slope.



$\frac{\Delta Y}{\Delta X} = \frac{-120}{40} = -3$

And this means 3 dollars a month is spent

The last part of the test is evaluating expressions and functions

Evaluate the following if s = -2 and r =5

1) $\left(\sqrt[3]{11+s}\right)r+\left(|s|\right)^2$

2) $(sr)^2+|sr|+|s|$

Oct 30-2:57 PM

1) $(\sqrt{11+s})r+(|s|)^2$

$(\sqrt{11+(-2)})r+(|-2|)^2$

$(\sqrt{11-2})5+(2)^2$

$(\sqrt{9})5+4$

$(3)5+4$

$15+4$

19

2) $(sr)^2+|sr|+|s|$

$(-2\cdot5)^2+|-2\cdot5|+|-2|$

$(-10)^2+|-10|+2$

$100+10+2$

112

Oct 30-2:57 PM

If $R=3$ $m=2$ $n=-1$

and given

$$f(x)=\frac{Rx+mn}{xn}$$

$f(2)=$

Oct 30-3:17 PM

If $R=3$ $m=2$ $n=-1$

and given

$$f(x)=\frac{Rx+mn}{xn}$$

$$f(2)=\frac{3(2)+2(-1)}{2(-1)}=\frac{6+(-2)}{-2}$$

$$=\frac{4}{-2}=-2$$

$$f(2)=-2$$

Oct 30-3:17 PM