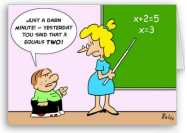


Warm Up Grade 8

The equation of a linear relation is: $y = -4x + 1$

a) Create a table of values for the relation for integer values of x from -4 to 4.
b) Graph the relation.
c) Describe the relationship between the variables in the graph.

A

x	y
-4	17
-3	13
-2	9
-1	5
0	1
1	-3
2	-7
3	-11
4	-15

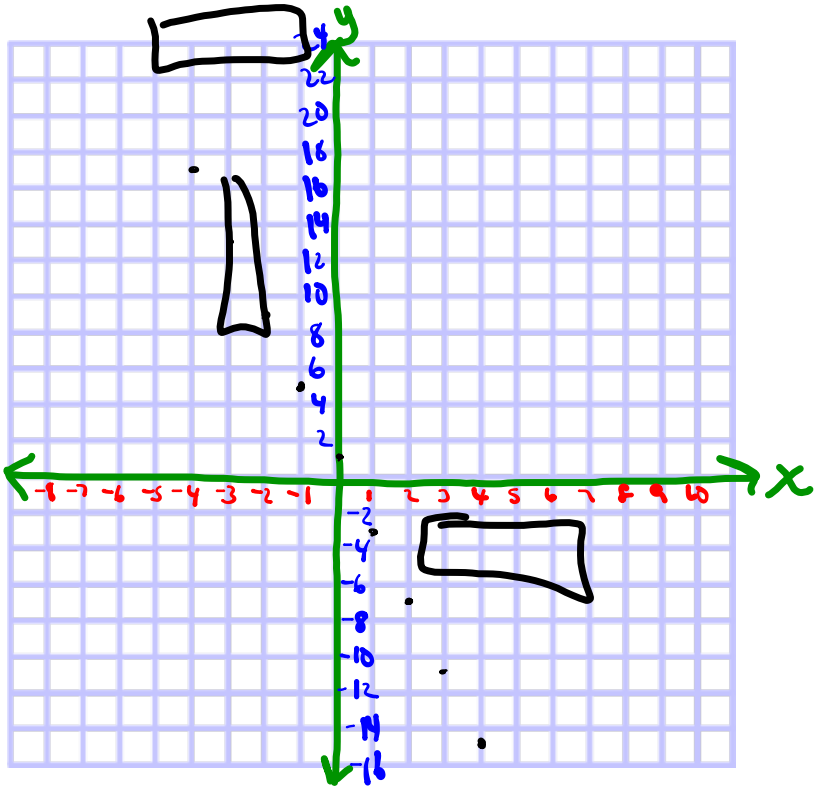
inc ↓ decrease by 4

$x = -4$
$y = -4x + 1$
$= -4(-4) + 1$
$= 16 + 1$
$= 17$

$x = -3$
$y = -4x + 1$
$-4(-3) + 1$
$12 + 1$
$= 13$

$x = -2$
$y = -4x + 1$
$y = -4(-2) + 1$
$8 + 1$
9

c) As x increase by 1, y decreases by 4.



x	y
-4	17
-3	13
-2	9
-1	5
0	1
1	-3
2	-7
3	-11
4	-15

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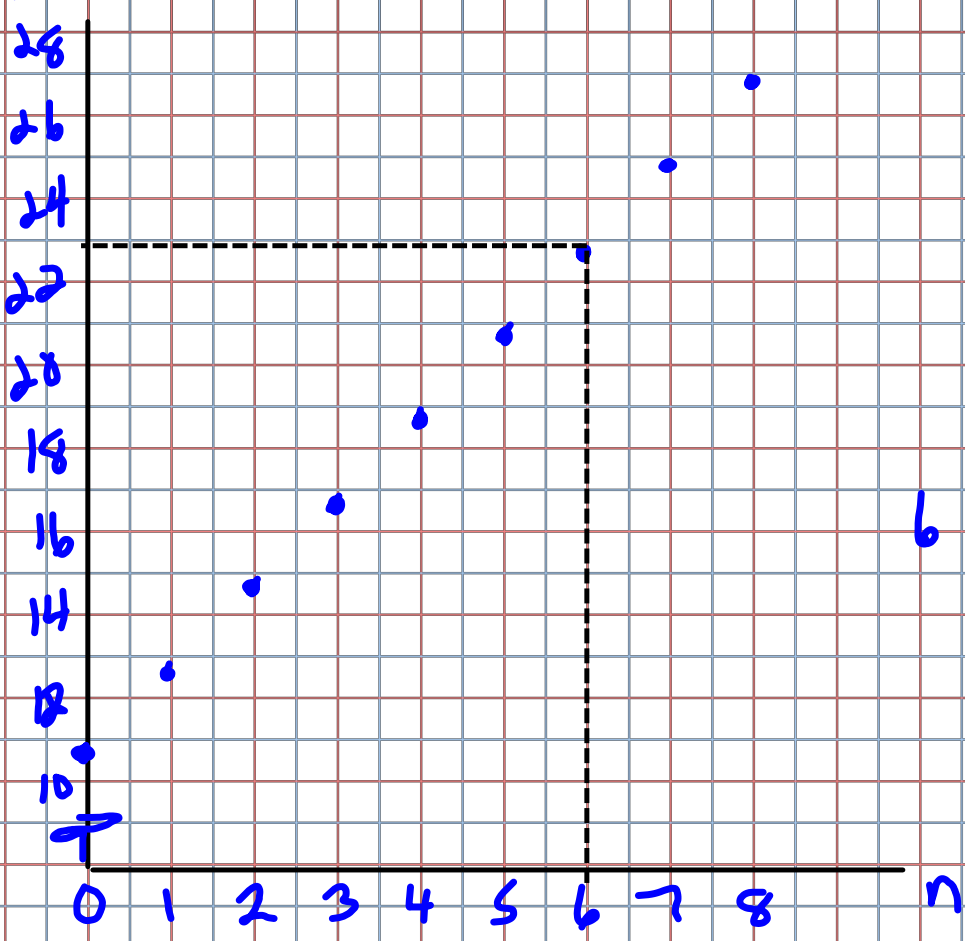
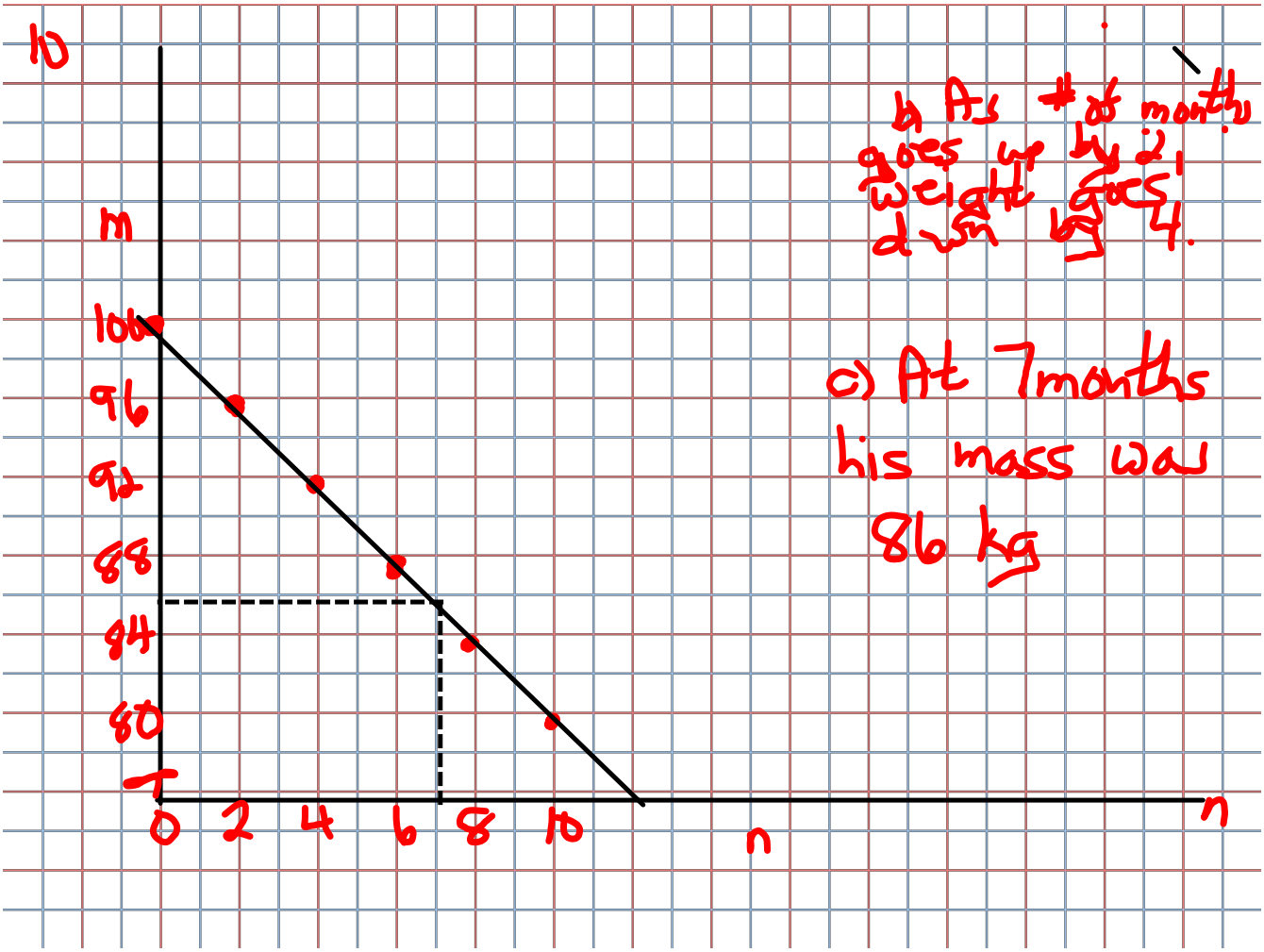
q.



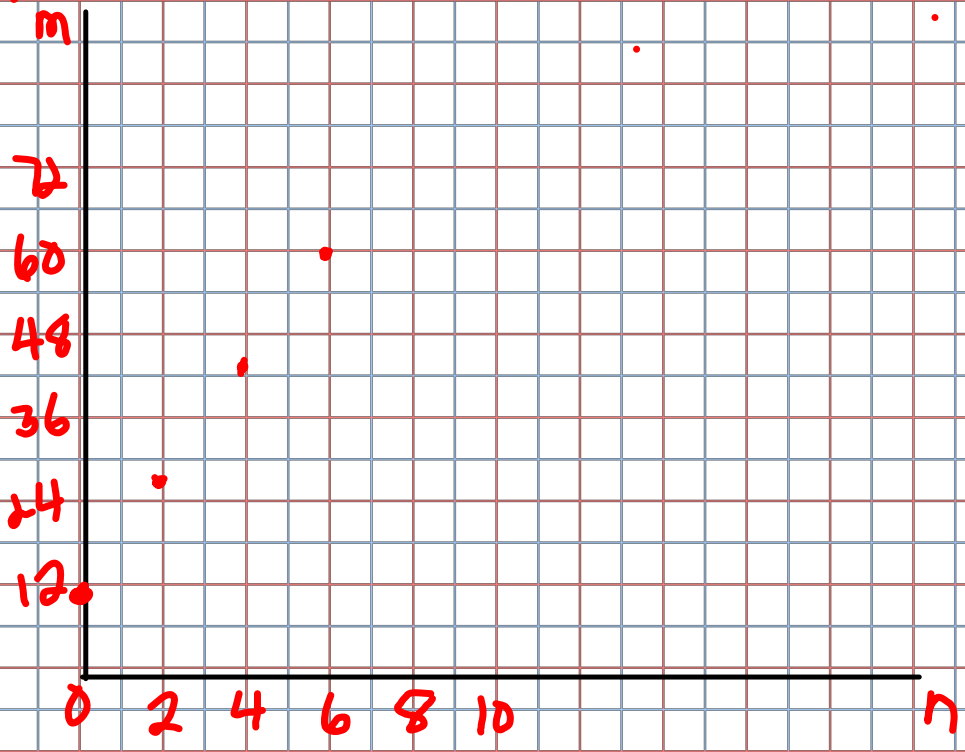
6 toppings
$23

b) as n goes up by 1, cost goes up by 2


10
m
100
96
92
88
84
80
0 2 4 6 8 10
n
n
b) As # of months goes up by 2, weight goes down by 4.
c) At 7 months his mass was 86 kg

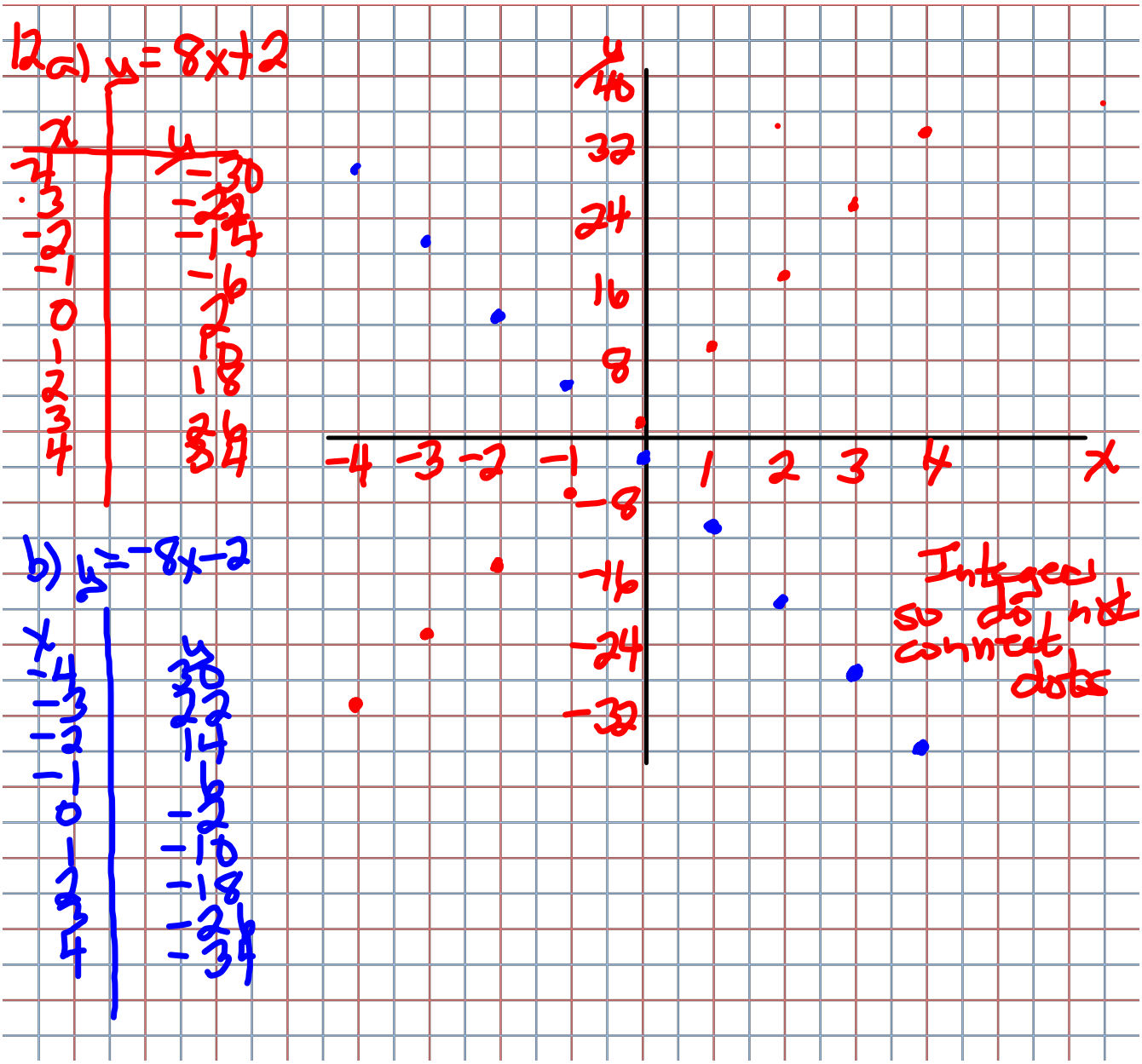
11 $m = 8n + 12$

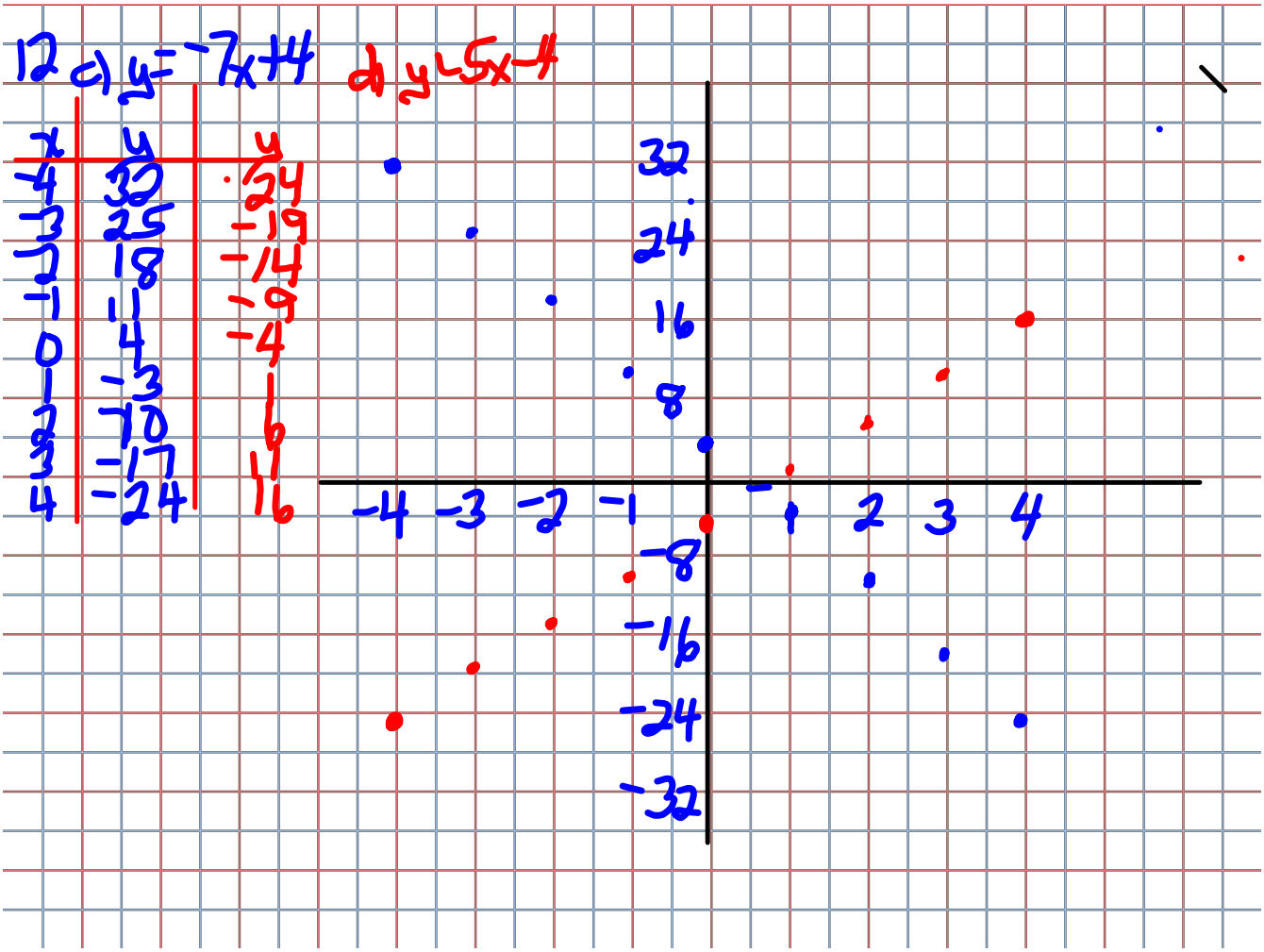
n	m
0	12
2	28
4	44
6	60



b) As # of people go up by 1, # of marshmellows go up by 8

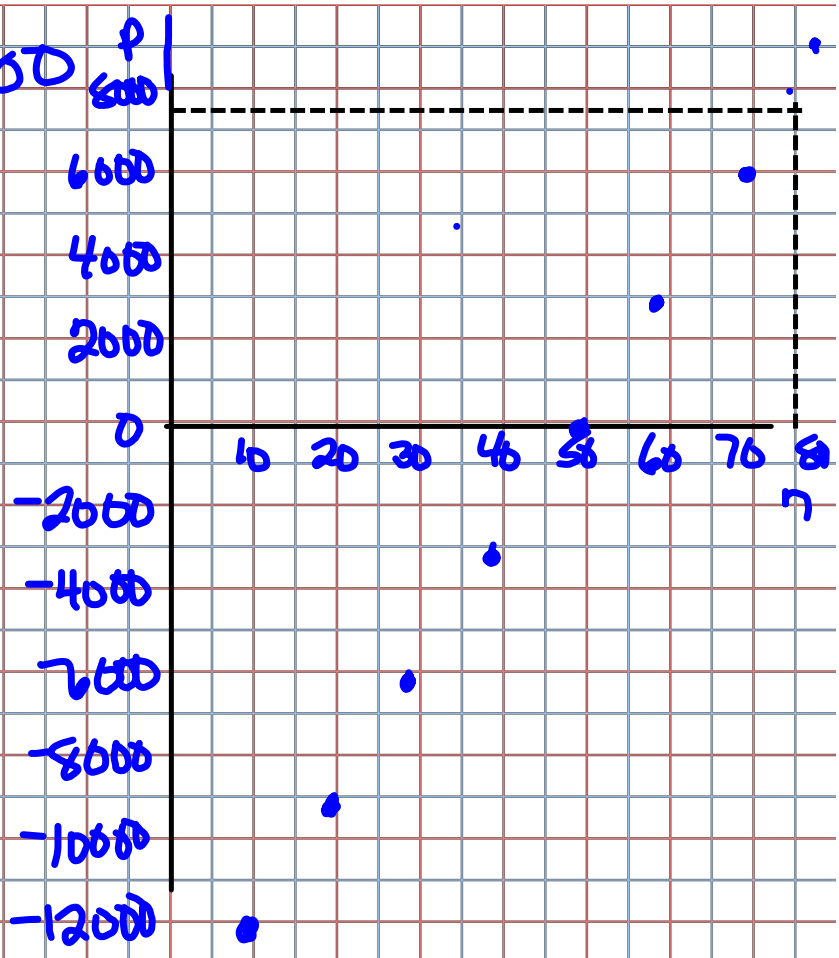
d) Yes, it linear, the dots would form a straight line


12a) y = 8x + 2
x | y
-4 | -30
-3 | -22
-2 | -14
-1 | -6
0 | 2
1 | 10
2 | 18
3 | 26
4 | 34
b) y = -8x - 2
x | y
-4 | 30
-3 | 22
-2 | 14
-1 | 6
0 | -2
1 | -10
2 | -18
3 | -26
4 | -34
y
40
32
24
16
8
-8
-16
-24
-32
-4 -3 -2 -1 1 2 3 4 x
Integers so do not connect dots


12 a) y = -7x + 4
x | y | y
-4 | 32 | 24
-3 | 25 | -19
-2 | 18 | -14
-1 | 11 | -9
0 | 4 | -4
1 | -3 | 1
2 | -10 | 6
3 | -17 | 11
4 | -24 | 16
b) y = 5x - 4
32
24
16
8
-8
-16
-24
-32
-4 -3 -2 -1 1 2 3 4

13 $p = 300n - 15000$

n	p
10	-12000
20	-9000
30	-6000
40	-3000
50	0
60	3000
70	6000
80	9000



b) - values for p represent money loss

c) As # of tickets goes up by 10, the profit goes up by 3000.

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18) $y = -7x + 4$

a) $(-2, \_\_)$

$y = -7(x) + 4$

$= -7(-2) + 4$

$= 14 + 4$

$= 18$

b) $(-1, -17)$

$-17 = -7(x) + 4$

$-17 - 4 = -7x + 4 - 4$

$-21 = -7x$

$\frac{-21}{-7} = \frac{-7x}{-7}$

$+3 = x$

c) $(8, \_\_)$

$y = -7x + 4$

$= -7(8) + 4$

$= -56 + 4$

$= -52$

d) $(-, 4)$

$y = -7x + 4$

$4 = -7x + 4$

$4 - 4 = -7x + 4 - 4$

$\frac{0}{-7} = \frac{-7x}{-7}$

$0 = x$

19) $p = 200 + 40\,n$

n	p
0	200
1	240
2	280
3	320
4	360

+40, +40

n=0

$p = 200 + 40\,(n)$

$= 200 + 40\,(0)$

$= 200 + 0$

$= 200$

n=1

$p = 200 + 40\,(n)$

$= 200 + 40\,(1)$

$= 200 + 40$

$= 240$

n=2

$p = 200 + 40\,(n)$

$= 200 + 40\,(2)$

$= 200 + 80$

$= 280$

b) n = 9

$p = 200 + 40\,(n)$

$= 200 + 40\,(9)$

$= 200 + 360$

$= 560$

Francis' pay for the week when he sold 9 memberships is $560.

$p = 200 + 40\,(n)$

$480 = 200 + 40n$

$480 - 200 = 200 - 200 + 40n$

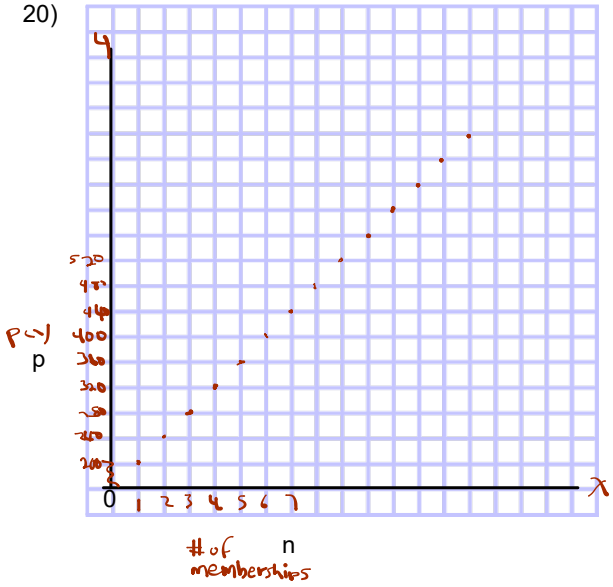
$280 = 40\,n$

$\frac{280}{40} = \frac{40\,n}{40}$

$7 = n$

Graph $p = 200 + 40n$

20)



b) When n increases by 1, p increases by 40

$y = -3x + 10$

x , y

a) $(-5, \_\_)$

Given $x = -5$

$y = -3x + 10$

$= -3(-5) + 10$

$= 15 + 10$

$y = 25$

$(-5, 25)$

b) $(7, \_\_)$

Given $x = 7$

$y = -3x + 10$

$= -3(7) + 10$

$= -21 + 10$

$y = -11$

$(7, -11)$

c) $(\_\_, -50)$

Given $y = -50$

$y = -3x + 10$

$-50 = -3x + 10$

$-50 - 10 = -3x + 10 - 10$

$-60 = -3x$

$\frac{-60}{-3} = \frac{-3x}{-3}$

$20 = x$

Class/Homework

Practice 6 Making Tables

#3, #4

Practice 7 Graphing Linear Equations

#1a

As x ____ by ____ , y ____ by ____

increase or decrease # increase or decrease #

#4

Test Tomorrow on Section 6.6 & 6.7

2 MC

1 Short Response (Word problem with equation given)

Part a to f (Requires to graph)

test moved to tomorrow

Attachments

Extra Practice 6 creating tables.pdf

Extra Practice 7 graphing linear equations.pdf