Warm Up Grade 8
Date: Jan. 16

1) The equation of a linear relation is $y = 3x - 4$. Find the missing number in each ordered ordered pair. Show work.

a) (-4, ___) (x, y)

Given $x = -4$
$y = ?$

$y = 3x - 4$
$y = 3(-4) - 4$
$y = -12 - 4$
$y = -16$

$(-4, -16)$

b) (11, ___) (x, y)

Given
$x = 11$
$y = ?$

$y = 3x - 4$
$y = 3(11) - 4$
$y = 33 - 4$
$y = 29$

$(11, 29)$

c) (___, 14) (x, y)

Given $y = 14$
$x = ?$

$y = 3x - 4$
$14 = 3x - 4$
$14 + 4 = 3x - 4 + 4$
$18 = 3x$
$\div 3 \quad \div 3$
$6 = x$

$(6, 14)$

HW Sol

$y = 5x - 4$

a) $(7, y)$

Given $x = 7$, $y = ?$

$y = 5x - 4$

$y = 5(7) - 4$

$y = 35 - 4$

$\boxed{y = 31}$

$(7, 31)$

b) $(-2, y)$

Given $x = -2$, $y = ?$

$y = 5x - 4$

$y = 5(-2) - 4$

$y = -10 - 4$

$\boxed{y = -14}$

$(-2, -14)$

c) $(x, 51)$

Given $y = 51$, $x = ?$

$y = 5x - 4$

$51 = 5x - 4$

$51 + 4 = 5x - 4 + 4$

$55 = 5x$

$\div 5 \quad \div 5$

$\boxed{11 = x}$

$(11, 51)$

Class/Homework

Extra Practice 7 HOL- Graphing

Page 373 #18, #19

Test Tuesday, Jan 20

2 MC
1 Short Response (Word problem with equation given)
Part a to f (Requires to graph)

Extra practice 7

1a)

$y = -6x + 1$

x	y
-3	19
-2	
-1	
0	
1	
2	
3	

As x _____,
then y _____

1b)

x	

2a) $y = x$

x	y
-3	-3
-2	-2
-1	
0	
1	
2	
3	

b) $y = -(x)$

x	y
-3	+3 ⇐ $-(-3)$
-2	
-1	
0	
1	
2	
3	

c)

x	y
-3	11
-2	
-1	
0	
1	
2	
3	

d)

$y = -2x + 5$

$x = -3$ $x = -2$ $x = -1$

$y = -2x + 5$
$y = -2(-3) + 5$
$6 + 5$
11

Page 373

18. The equation of a linear relation is:
$y = -7x + 4$
Find the missing number in each ordered pair.
a) $(-2, \ )$ **b)** $(\ , -17)$ **c)** $(8, \ )$ **d)** $(\ , 4)$

$y = -7x + 4$
$= -7(-2) + 4$
$= 14 + 4$
$= 18$
$(-2, 18)$

$-17 = -7x + 4$
$-17 - 4 = -7x + 4 - 4$
$-21 = -7x$
$\div -7 \quad \div -7$
$3 = x$
$(3, -17)$

$y = -7x + 4$
$= -7(8) + 4$
$= -56 + 4$
$= -52$
$(8, -52)$

d)
$y = -7x + 4$
$4 = -7x + 4$
$4 - 4 = -7x + 4 - 4$
$0 = -7x$
$\div -7 \quad \div -7$
$0 = x$
$(0, 4)$

19)

19. Francis sells memberships to a local health club. He is paid $200 per week, plus $40 for each membership he sells. An equation for this relation is $p = 200 + 40n$, where n represents the number of memberships Francis sells, and p represents his pay in dollars.
a) Use the equation to create a table of values.

$n = 0$
$P = 200 + 40(0)$
$200 + 0$
200

$n = 1$
$P = 200 + 40(1)$
$= 200 + 40$
$= 240$

$n = 3$
$P = 200 + 40(3)$
$= 200 + 120$
$= 320$

19.a)

n	p
0	200
1	240
2	280
3	320
4	360
5	400
6	440
7	480

b) $560
c) 7 memberships

b) One week, Francis sold 9 memberships. What was his pay for that week?

$n = 9$
$P = 200 + 40(9)$
$= 200 + 360$
$= 560$
Francis' pay for 9 memberships is $560.

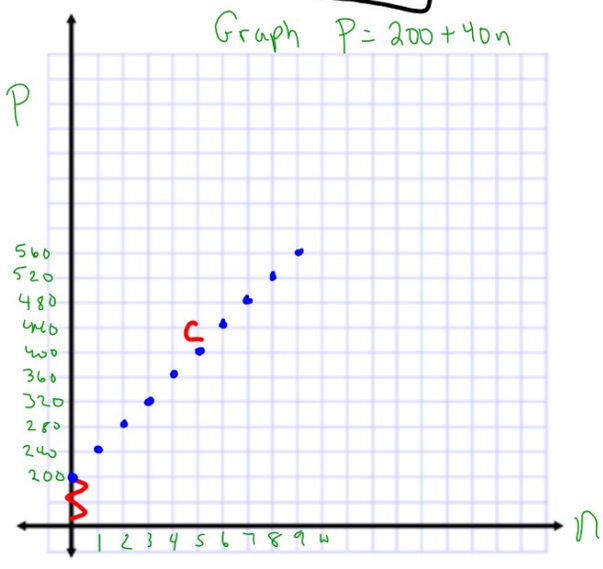
c) One week, Francis was paid $480. How many memberships did he sell that week?

$480 = 200 + 40n$
$-200 \quad -200$
$280 = 40n$
$\div 40 \quad \div 40$
$7 = n$

20)

20. Use the data from question 19.
a) Construct a graph for the data.
b) Describe the relationship between the variables in the graph.
c) Find the ordered pair on the graph that shows Francis' pay when he sells 5 memberships.

Francis
Graph $P = 200 + 40n$



b) As n increases by 1, P increases by 40

c) $(5, 4000)$