W-A1 Algebra 1 Week 28 4/17

1.) $(4,9)$ and $(12,y)=27$ (*3)

$k=\frac{y}{x}=\frac{9}{4}$

$y=\frac{9}{4}x$

$y=\frac{9}{4}x$

$y=\frac{9}{4}\left(\frac{12}{1}\right)=27$

2.) $(2,6)$ and $(x,27)$

$k=\frac{y}{x}=\frac{6}{2}=3$

$y=3x$

$y=3x$

$\frac{27}{3}=\frac{3x}{3}$

$x=9$

1.) Find k

2.) $y=kx$

3.) solve

$k=\frac{y}{x}$

38, 34, 30, 26, ...

−4 −4

Find 5th term

10th term

100th term

start difference

$38-4(n-1)$

5th $38-4(5-1)$

$38-4(4)$

$38-16=22$

10th term

$38 - 4(n-1)$

$38 - 4(10-1)$

$38 - 4(9)$

$38 - 36 = \boxed{2}$

100th term

$38 - 4(n-1)$

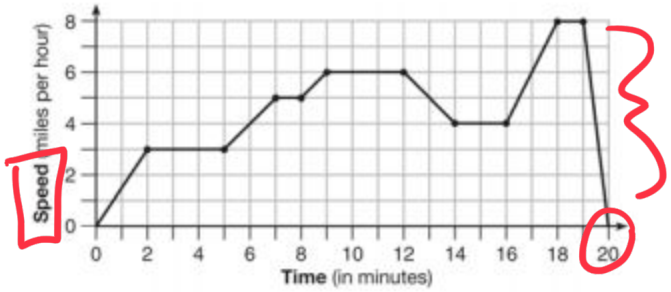
$38 - 4(100-1)$

$38 - 4(99)$

$38 - 396 = \boxed{-358}$

Algebra 1 Chapter 5 Pre-Test

1.) (2.5 pts each, 10 pts total) (5-1) The graph below represents Arlene's speed during her 20-minute jog around her neighborhood. Use the graph to answer the following questions.



a) During which intervals was Arlene's speed increasing?

0→2, 5→7, 8→9, 16→18

b) During which intervals was Arlene's speed decreasing?

12→14, 19→20

c) During which intervals was Arlene's speed constant?

2→5, 7→8, 9→12, 14→16, 18→19

d) What time(s) did Arlene stop?

20

X y

2.) (5 pts total) (5-2) Find the domain and range of each relation.

a) {(-2,7), (-1,4), (0,9), (3,2)}

Domain: {-2,-1,0,3}

Range: {7,4,9,2}

NO PARTIAL CREDIT!

3.) (5 pts each, 10 pts total) (5-2) Determine whether each relation is a function.

a) {(-8,4), (-4,4), (-1,2), (7,2)}

functin! yaw!

Every input must have one, and only one, output.

b) {(-6,3), (-5,-9), (-5,0), (-2,3)}

Naw!

4.) (10 pts each, 20 pts total) (5-3) Use a table to graph each of the following functions.

a) $y = 3x - 5$ ← y-int

you do not have to use the table!

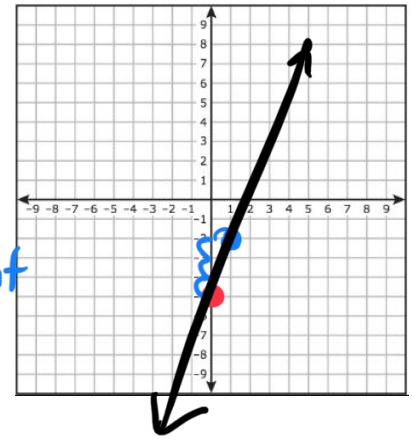
x	y = 3x - 5	y
-2		
-1		
0		
1		
2		

1.) Plot y-int

2.) Use slope

3 → up 3

1 right

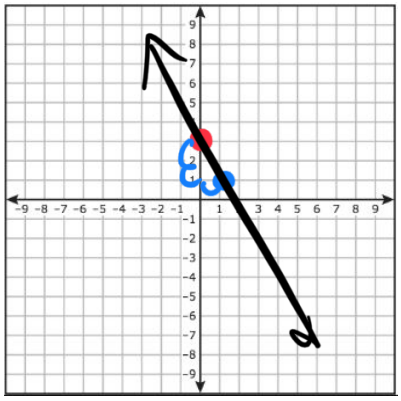


b) $y = -2x + 3$ y-int

down 2

1 right

x	y = -2x + 3	y
-2		
-1		
0		
1		
2		



5.) (5 pts each, 15 pts total) (5-4) Analyze table and write the function rule.

x	f(x)
1	4
3	6
7	10
8	11

+3 +3 +3 +3

+3 -2.5

$x+3=f(x)$ or $x+3=y$ $y=x+3$ $f(x)=x+3$

x	f(x)
0	0
2	7
4	14
10	35

x	f(x)
-4	10
-2	12
1	15
3	17

6.) (5 pts each, 10 pts total) (5-5) For the data in the table, tell whether y varies directly with x. If it does, write an equation for direct variation.

x	f(x)
-3	9
0	0
2	14
8	20

$k = y/x$

$9/-3 = -3$

$14/2 = 7$

$[y = kx]$

{(0,0)} is a characteristic of direct variation

Naw! not direct variation!

x	f(x)
-2	4
0	0
3	-6
4	-8

$k = \frac{y}{x}$

$4/-2 = -2$

$-6/3 = -2$

$-8/4 = -2$

yaw!

$y = -2x$

7.) (2.5 pts each, 5 pts total) (5-5) Is each of the following equations an example of direct variation? If so, find the constant of variation. (k)

$y = kx$ {(0,0)}

a) -3x + 4y = 0

yaw. $+3x \quad +3x$

$\frac{4y}{4} = \frac{3x}{4}$

$y = \frac{3}{4}x \quad k = \frac{3}{4}$

b) y + 5 = 2x

$-5 \quad -5$

naw. $y = 2x - 5$

$y + 5 = 2x \quad (0,0)$

$0 + 5 = 2(0)$

$5 \neq 0$ false → naw!

8.) (5 pts each, 10 pts total) (5-5) Each of the following ordered pairs are examples of direct variation. Find each missing value.

a) (3, 8) and (x, 20)

$k = \frac{y}{x}$ $\quad y = 20$

$k = \frac{8}{3}$

$y = \frac{8}{3}x$

$\frac{3}{8} \cdot \frac{20}{1} = \frac{8}{3}x \cdot \frac{3}{8}$

$\frac{15}{2} = x$

b) (4, y) and (12, -9)

9.) (5 pts each, 15 pts total) (5-6) Find the fifth, tenth, and hundredth terms of each sequence.

a) 6, 14, 22, 30,...

+8

$6 + 8(n-1)$

5th 10th 100th

b) 12, 5, -2, -9,...

c) -18, -23, -28, -33