Name: Key

Homework: Making a Function Table & Applications of Functions

Make a function table for each equation. List domain & range for each function

1.) $y = 2x - 4$

x	$y = 2x - 4$	y
-2	$y = 2(-2) - 4$	-8
-1	$y = 2(-1) - 4$	-6
0	$y = 2(0) - 4$	-4
1	$y = 2(1) - 4$	-2
2	$y = 2(2) - 4$	0

Domain $\{-2, -1, 0, 1, 2\}$

Range: $\{-8, -6, -4, -2, 0\}$

2.) $y = 5 + 3x$

x	$y = 5 + 3x$	y
-2	$y = 5 + 3(-2)$	-1
-1	$y = 5 + 3(-1)$	2
0	$y = 5 + 3(0)$	5
1	$y = 5 + 3(1)$	8
2	$y = 5 + 3(2)$	11

Domain: $\{-2, -1, 0, 1, 2\}$

Range: $\{-1, 2, 5, 8, 11\}$

Rules for domain & range:
- List each # only once
- Numerical order = least to greatest

3.) $y = -3x + 4$

x	$y = -3x + 4$	y
-2	$y = -3(-2) + 4$	10
-1	$y = -3(-1) + 4$	7
0	$y = -3(0) + 4$	4
1	$y = -3(1) + 4$	1
2	$y = -3(2) + 4$	-2

Domain: $\{-2, -1, 0, 1, 2\}$

Range: $\{-2, 1, 4, 7, 10\}$

4.) $y = 9 - 4x$

x	$y = 9 + -4x$	y
-2	$y = 9 + -4(-2)$	17
-1	$y = 9 + -4(-1)$	13
0	$y = 9 + -4(0)$	9
1	$y = 9 + -4(1)$	5
2	$y = 9 + -4(2)$	1

Domain: $\{-2, -1, 0, 1, 2\}$

Range: $\{1, 5, 9, 13, 17\}$

5.) In a recent season, Steph Curry of the Golden State Warriors averaged 20.7 points per game. His approximate total points scored is a function of the number of games played.

a.) Write a function rule to represent the total points scored.

$y = 20.7x$

x = # of games
y = Total points scored

b.) Identify the independent and dependent variable.

Independent variable - # of games
Dependent variable - Total points scored

c.) What values of the domain and range make sense for this situation?

Domain: must be zero or greater and a whole number
Range: must be zero or greater

d.) Determine the number of points scored in 9 games. (what is y if x=9)

$y = 20.7(9)$
$y = 186.3$

After 9 games he would have scored 186.3 points approximately

6) Joe belongs to a music club that charges a monthly fee of $5 plus $.50 per song that he downloads.

a.) Write a function rule to represent the amount of money he would pay in one month to download any amount of songs.

$y = 5 + .50x$

x = # of songs downloaded
y = total cost

b.) Identify the independent and dependent variable.

$x \rightarrow$ Independent variable - # of songs downloaded
$y \rightarrow$ Dependent variable - Total cost

c.) What values of the domain and range make sense for this situation?

$x \rightarrow$ Domain - must be zero or greater and a whole number
$y \rightarrow$ Range - must be 5 or greater and in increments of .50

d.) What is the cost if he downloads 30 songs? (what is y if x=30)

$y = 5 + .50(30)$
$y = 20$

The cost of 30 songs is $20.

Label!