

Name: Key

Homework: Making a Function Table & Applications of Functions

Make a function table for each equation. State: Domain & Range

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 |

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

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

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 |

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

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

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 |

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

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

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 |

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

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

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.

$$y = 20.7x$$

b.) Identify the independent and dependent variable.

x (independent) \rightarrow # of games

y (dependent) \rightarrow total points

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

Domain: 0 and whole numbers \rightarrow (games)

Range: 0 and up

\rightarrow average of points can be decimals

d.) Determine the number of points scored in 9 games.

$$y = 20.7(9)$$

186.3 points in 9 games

or 186 points in 9 games

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

flat fee

increases per song

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

$$y = .50x + 5$$

b.) Identify the independent and dependent variable.

x (independent): # of songs

y (dependent): total amount paid

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

Domain: 0 and whole #s \rightarrow songs

Range: 5 and up

\rightarrow \$5 charge just to be in club

d.) What is the cost if he downloads 30 songs?

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

$$|y = \$20 \text{ for 30 songs}|$$