

Function and Function Notation – Practice Problems



Name: _____

Period: _____

Functions and Relations

Identify the domain and range then identify if it is a function. (1pt /blank)

1. (13,14), (12,5), (16,7), (13, 14),
(-2, 33), (13, 14)

Domain: _____

Range: _____

Function: yes or no

2.

| | | | | |
|--------|----|----|-----|---|
| input | 2 | 0 | -2 | 6 |
| output | -2 | -6 | -10 | 2 |

Domain: _____

Range: _____

Function: yes or no

3. Complete the Input-Output table for each function.

$$f(x) = 3x - 2.$$

| | | | | |
|--------|----|---|---|---|
| Input | -2 | 0 | 3 | 7 |
| Output | | | | |

$$f(x) = 4x + 2$$

| | | | | |
|------|----|---|---|---|
| x | -2 | 0 | 3 | 7 |
| f(x) | | | | |

4. Determine the restriction on the domain of each function.

a. $y = \frac{x-3}{x+7}$

b. $\frac{1}{5-x}$

5. Which of the following relations is a function?

- a) { (3, -1), (4, -5), (3, 6), (8, 7) }
- b) { (-1, 2), (3, 4), (-3, 4), (7, -2) }
- c) { (-2, 8), (-2, 6), (-2, 4), (-2, -2) }
- d) { (5, -4), (-3, -2), (5, 5), (1, -2) }
- e) { (0, 1), (0, 3), (0, 5), (0, 7) }

6. Given $f(x) = 5x - 6$. (2pts)

What is $f(3)$?

What is $f(-1)$?

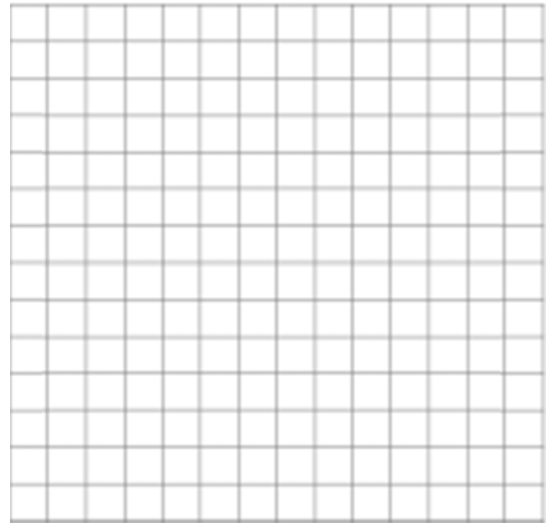
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7. Mrs. Jones has 70 postage stamps. She plans on using 5 stamps each week. Write an equation that gives stamps S as a function of weeks, w . (2pts)

a. What is the domain of your function? (1pt)

b. Graph your function (2pts)

c. How many stamps will she have at the end of 6 weeks? (1pt)



8. Rewrite so that y is a function of x : $4x - (y - 2) = 10 + y$

9. The balance B of minutes on a cell phone plan can be modeled with the function $B = 1550 - 50d$, where d is the number of days after the plan has started. Which statement is true? (1pt)

- The balance of minutes is decreasing by 50 minutes/day.
- The balance of minutes is increasing by 50 minutes/day.
- The balance of minutes is decreasing by 1550 minutes/day.
- The balance of minutes is increasing by 1550 minutes/day.

10. Which of the following graphs is *not* a function?

