

7.1-7.3 Review- Answers

1. **Function:** A relation in which each input only has one output  
**Domain:** The set of values that are inputs (x-values)  
**Range:** The set of values that are outputs (y-values)
2. If a graph represents a function, then a vertical line will never intersect the graph at multiple points.
3. A vertical line does not represent a function because it only has one x-value and an infinite amount of y-values.  
 A horizontal line represents a function because it passes the vertical line test. Every input has one output.

4. a. Not a function.  
*Domain* :  $[0, \infty)$   
*Range* :  $(-\infty, \infty)$   
 b. Not a function.  
*Domain* :  $\{-5, -3, 1, 4\}$   
*Range* :  $\{-3, 2, 3, 5\}$   
 c. Function.  
*Domain* :  $\{-3, 2, 3, 5\}$   
*Range* :  $\{-4, 2, 85\}$

5. A continuous function has no breaks in the domain or range. → Graph a is continuous  
 A discrete function has breaks in the domain or range. → Graphs b and c are discrete

6. *Domain* :  $(-\infty, \infty)$   
*Range* :  $(-\infty, \infty)$

7. a. Not a function.  
*Domain* :  $\{-2, 0, 3, 4\}$   
*Range* :  $\{-1, 0, 1, 3\}$   
 b. Function.  
*Domain* :  $\{-3, -1, 0, 1, 5\}$   
*Range* :  $\{0, 2, 3, 8\}$

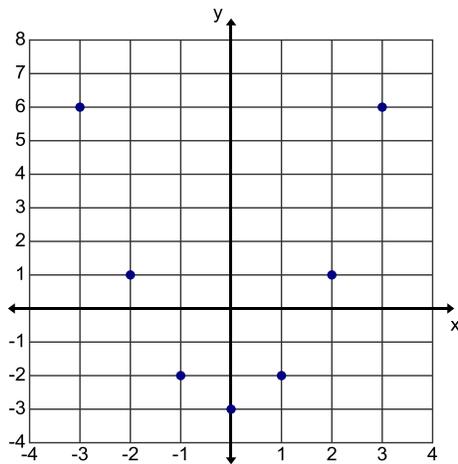
8. See pictures.

9. a.

x	-3	-2	-1	0	1	2	3
y	6	1	-2	-3	-2	1	6

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b.



c. This equation represents a function. Each input has one output and the graph passes the vertical line test.

d. *Domain* :  $\{-3, -2, -1, 0, 1, 2, 3\}$

*Range* :  $\{-3, -2, 1, 6\}$

10. a. Independent Variable: Minutes spent on call

Dependent Variable: Cost of call

b. Independent Variable: Number of cookies

Dependent Variable: Amount of flour used

c. Independent Variable: Correct Answers

Dependent Variable: Score on test

11. a. *Domain* :  $\{-4, -2, 0, 1, 3, 4, 5, 6\}$

*Range* :  $\{-3, -2, -1, 0, 4, 5, 6\}$

b. *Domain* :  $[-4, 6)$

*Range* :  $[-2, 4]$

c. *Domain* :  $(-\infty, 3]$

*Range* :  $(0, 7]$