



3-1 Reteach to Build Understanding

Relations and Functions

1. The domain is the set of x -values and the range is the set of y -values. A relation is any set of ordered pairs. A relation is a function when each input, or element in the domain, has exactly one unique output, or element in the range.
- a. Draw a circle around the correct domain and range.

x	2	3	4	5	6
y	4	6	8	10	12

Range:
{4, 6, 8, 10, 12}

Domain:
{4, 6, 8, 10, 12}

Domain:
{2, 3, 4, 5, 6}

Range:
{2, 3, 4, 5, 6}

- b. Circle the relation that is a function.

x	2	3	4	5	6
y	4	6	8	10	12

x	2	2	4	5	6
y	5	6	7	9	11

x	2	3	4	5	4
y	4	5	6	8	2

2. Pilar is given the following set of ordered pairs. $\{(2, 4), (4, 6), (6, 8), (8, 10), (12, 8)\}$. Read her statements. Pilar incorrectly identified two of the key features of relations and functions. Put an X next to any incorrect statements. Correct her errors.
- The domain is $\{2, 4, 6, 8\}$.
 - The range is $\{4, 6, 8, 10\}$.
 - The set of ordered pairs is a relation.
 - The relation is a function because it passes the vertical line test.
 - The relation is not a function because two inputs go to the same output.
3. Identify the domain and range of each relation. Fill in the correct number(s) in the blanks to identify the domain and range. Then tell whether or not it is a function by circling the correct response.
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| a. $\{(2, 3), (4, 6), (1, 5), (2, 5), (0, 5)\}$ | b. $\{(3, 4), (5, 4), (7, 4), (8, 4), (10, 4)\}$ |
| Domain: $\{0, 1, 2, \underline{\hspace{1cm}}\}$ | Domain: $\{3, 5, 7, \underline{\hspace{1cm}}, \underline{\hspace{1cm}}\}$ |
| Range: $\{3, 5, \underline{\hspace{1cm}}\}$ | Range: $\{\underline{\hspace{1cm}}\}$ |
| Function Not a Function | Function Not a Function |