3.6 Practice Writing Rules (equations) from tables, graphs, word problems.

Write a rule for the function.

1. \[ \text{Input, } x \begin{array}{cccc} 1 & 2 & 3 & 4 \\ \text{Output, } y \end{array} 5 \ 10 \ 15 \ 20 \]

\[ Y = \]

2. \[ \text{Input, } x \begin{array}{cccc} 10 & 11 & 12 & 13 \\ \text{Output, } y \end{array} 3 \ 4 \ 5 \ 6 \]

\[ y = \]

Graph the function

3. \[ y = \frac{1}{3}x \]
   Domain: 0, 1, 2, 3, 6

4. \[ y = 4x - 3 \]
   Domain: 1, 2, 3, 4, 5

5. \[ y = 1.2x \]
   Domain: 1, 2, 3, 4, 5

Write a rule for the function represented by the graph. Identify the domain and range of the function.

6. \[ y = \]
   Domain: 0, 1, 2, 3
   Range:

7. \[ y = \]
   Domain: 0, 1, 2, 3
   Range:

8. \[ y = \]
   Domain: 0, 1, 2, 3
   Range:

9. \[ y = \]
   Domain: 0, 1, 2, 3
   Range:

10. \[ y = \]
    Domain: 0, 1, 2, 3
    Range:

11. \[ y = \]
    Domain: 0, 1, 2, 3
    Range:

12. \[ y = \]
    Domain: 0, 1, 2, 3
    Range:

Write an equation of the line shown.

14. \[ y = \]

15. \[ y = \]

16. \[ y = \]
You can use a verbal rule, an equation, a table, or a graph to represent a function.

Complete the table.

<table>
<thead>
<tr>
<th>Verbal Rule</th>
<th>Equation</th>
<th>Table</th>
<th>Graph</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Verbal Rule</strong></td>
<td><strong>Equation</strong></td>
<td><strong>Table</strong></td>
<td><strong>Graph</strong></td>
</tr>
</tbody>
</table>
| The output is 1 less than twice the input. | \( y = 2x - 1 \) | \[
<table>
<thead>
<tr>
<th>x</th>
<th>y</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>2.5</td>
</tr>
<tr>
<td>1</td>
<td>3.5</td>
</tr>
<tr>
<td>2</td>
<td>4.5</td>
</tr>
<tr>
<td>3</td>
<td>5.5</td>
</tr>
<tr>
<td>[ y = -3x + 2 ]</td>
<td></td>
</tr>
</tbody>
</table>