

Which Number Doesn't Belong in the Function Table?

➤ Understanding number patterns in function tables helps prepare us for algebra. We can read function tables from left to right, so whatever happens to the input will create an output. For example, if the input is 1 and we add 2, our output is 3. The change that happens, plus 2, is called the rule.

Directions: **ANSWER SHEET**

1. Identify the number pattern and rule in the function (input-output) table.
2. Circle the number that does not belong in the table and write in the number that should replace it.
3. Then, complete the sentence stems in the second column.

1.	<table border="1"> <thead> <tr> <th>Input</th> <th>(Rule)</th> <th>Output</th> </tr> </thead> <tbody> <tr> <td>4</td> <td>→</td> <td>7</td> </tr> <tr> <td>5</td> <td>→</td> <td>8</td> </tr> <tr> <td>6</td> <td>→</td> <td>9</td> </tr> <tr> <td>7</td> <td>→</td> <td>11</td> </tr> </tbody> </table>	Input	(Rule)	Output	4	→	7	5	→	8	6	→	9	7	→	11	<p>The rule for this input-output table is <u>+ 3 or plus three</u>.</p> <p>I know this is true because <u>the difference between input and output is 3</u>.</p> <p>The number that does not belong in the table is <u>11</u>.</p> <p>I figured this out by <u>adding three to each input and 7 + 3 is not 11</u>.</p> <p>The number should be <u>10</u>.</p>			
Input	(Rule)	Output																		
4	→	7																		
5	→	8																		
6	→	9																		
7	→	11																		
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Input	(Rule)	Output																		
9	→	7																		
10	→	8																		
11	→	13																		
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3.	<table border="1"> <thead> <tr> <th>Input</th> <th>(Rule)</th> <th>Output</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>→</td> <td>5</td> </tr> <tr> <td>2</td> <td>→</td> <td>10</td> </tr> <tr> <td>3</td> <td>→</td> <td>15</td> </tr> <tr> <td>4</td> <td>→</td> <td>20</td> </tr> <tr> <td>5</td> <td>→</td> <td>30</td> </tr> </tbody> </table>	Input	(Rule)	Output	1	→	5	2	→	10	3	→	15	4	→	20	5	→	30	<p>The rule for this input-output table is <u>x 5 or times five</u>.</p> <p>I know this is true because <u>I multiplied each input by 5 to get the output</u>.</p> <p>The number that does not belong in the table is <u>30</u>.</p> <p>I figured this out by <u>multiplying 5 by 5 and not getting 30</u>.</p> <p>The number should be <u>25</u>.</p>
Input	(Rule)	Output																		
1	→	5																		
2	→	10																		
3	→	15																		
4	→	20																		
5	→	30																		

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4.

Input	(Rule)	Output
2	→	9
4	→	11
6	→	13
8	→	16
10	→	17

The rule for this input-output table is plus 7.

I know this is true because I calculated $2 + 7$ to get 9, $4 + 7$ to get 11, and $6 + 7$ to get 13.

The number that does not belong in the table is 16.

I figured this out by calculating $8 + 7$ (the rule) to get 15 instead of 16.

The number should be 15.

5.

Input	Output
12	5
13	7
14	8
15	9
16	10

The rule for this input-output table is to take away 6.

I know this is true because I looked at the pattern of the numbers and saw that most of them had a difference of 6.

The number that does not belong in the table is 5.

I figured this out by realizing that all the rows had a difference of 6, but that row had a difference of 7.

The number should be 6.

6.

Input	Output
6	24
7	30
8	32
9	36
10	40

The rule for this input-output table is times four or $\times 4$.

I know this is true because I checked each row and that was the connection between the input and output numbers.

The number that does not belong in the table is 30.

I figured this out by $7 \times 4 = 28$, not 30.

The number should be 28.

Input	Output

YOU TRY IT! Make your own function table with one incorrect number, either in the input or output column. Then, ask a partner to identify the number that doesn't belong and explain their reasoning verbally.