

Name: _____

Date: _____

You've been working with patterns since you were a very small child.

Patterns with shapes: 

Patterns with numbers: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, ...

Now it is time to organize what you know about patterns onto a *table of values*

$X + 6 = Y$	
X	Y
0	6
1	7
2	8
3	9
4	10

← The variable equation tells us the rule.

← Each row has an "X" number and a "Y" number that go together.

The "X" number is the input. Add 6 to this number. The "Y" number is the output. This is the answer to the X number plus 6.

Different tables have different rules. Sometimes the rule is given, and you are asked to fill in the missing information on the function table using the rule.

On the first function table, the rule is "3 times a number," so you need to multiply each X number by 3 to get each Y number. Here, the missing numbers would be 6 (3×2), 12 (3×4), and 18 (3×6).

$3X = Y$	
X	Y
2	
6	

Sometimes the rule is not given, and you are asked to use what you observe about the relationship between the numbers to determine the rule.

X	Y
0	8
1	
2	10

On the second function table, observe what is happening between the X and Y numbers. Each Y number is 8 larger than its X number, so the rule is: $X + 8 = Y$.

Independent Practice: Function Tables

Apply the rule for each function table to fill in the missing numbers.

$$x + 4 = y$$

x	y
0	
1	
2	
3	

$$9x = y$$

x	y
3	
6	
9	
12	

$$x - 2 = y$$

x	y
10	
20	
30	
40	

$$x + 2 = y$$

x	y
11	
12	
13	
14	

$$x - 5 = y$$

x	y
15	
17	
19	
21	

$$3x = y$$

x	y
4	
5	
6	
7	

Analyze the relationship between the X and Y numbers to figure out the rule for each table.

x	y
0	0
1	7
2	14
3	21

x	y
2	1
3	2
4	3
5	4

x	y
3	13
6	16
9	19
12	22

Figure out the rule for each table, and use it to complete the missing facts.

x	y
4	12
6	
8	24
10	

x	y
1	
3	8
	10
7	12

x	y
	0
1	8
2	
3	24