

# INPUT - OUTPUT TABLES

# ANSWERS

Complete each input-output table.

1.

Input	Output
1	3
3	7
5	11
6	13

Rule: Multiply by 2, add 1

2.

x	y
18	7.2
22	8.8
36	14.4
50	20

Rule: Divide by 2.5

3.

x	y
1	7
2	9
4	13
6	17

Rule: Multiply by 2, add 5

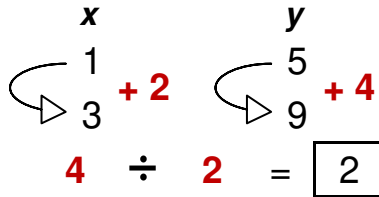
Find the rule and complete each input-output table.

## Helpful Example

x	y
1	5
3	9
4	11

Rule:?

THIS INPUT-OUTPUT TABLE HAS A TWO-STEP RULE. THE EASIEST WAY TO FIND IT IS TO CALCULATE HOW THE x AND y CHANGE.



DIVIDE THE CHANGE IN y BY THE CHANGE IN x, WHICH MAKES 2. THIS TELLS US THAT y IS CHANGING TWICE AS FAST AS x. SO  $y = 2x$ .

BUT  $1 \times 2 = 2$ , NOT 5. HOW DOES 2 CHANGE TO 5? HOW ABOUT ADDING 3? SO THE RULE MIGHT BE:  
MULTIPLY BY 2, ADD 3.  
TRY THIS ON THE OTHER VALUES TO SEE IF IT IS CORRECT.

$3 \times 2 = 6 + 3 = 9$  ✓

$4 \times 2 = 8 + 3 = 11$  ✓

Rule: Multiply by 2, add 3 ✓

Now your turn.

4.

x	y
0	3
1	11
2	19
3	27

Rule: **Multiply by 8, add 3**

5.

x	y
2	8
6	10
10	12
14	14

Rule: **Divide by 2, add 7**

6.

x	y
1	3
3	13
7	33
10	48

Rule: **Multiply by 5, subtract by 2**

7. William is paid 50% more money than Harold, and receives an additional \$2,500 sales bonus at the end of every year. Below is an input-output table showing the total amount each person made over the past 7 years. Complete the table by filling in the empty spaces.

		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
Input	Harold's wages	\$25,000	\$28,000	\$31,000	<b>\$35,000</b>	\$38,000	<b>\$39,000</b>	\$42,000
Output	William's wages	\$40,000	<b>\$44,500</b>	<b>\$49,000</b>	\$55,000	\$59,500	\$61,000	<b>\$65,500</b>