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.

x	*y*
1	5
3	9
+ 2	**+ 4**

4 ÷ 2 = 2

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** = 2**x**.

BUT 1 x 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 x 2 = 6 + 3 = 9 ✓

4 x 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	**$35,000**	$38,000	**$39,000**	$42,000
Output	William's wages	$40,000	**$44,500**	**$49,000**	$55,000	$59,500	$61,000	**$65,500**