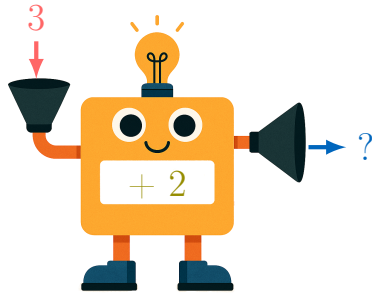


FUNCTIONS

A DEFINITION

A.1 CALCULATING THE OUTPUT OF A FUNCTION

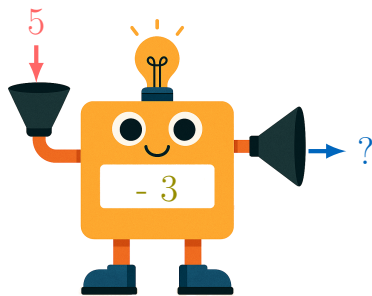
Ex 1:



- Rule: add 2
- Input: 3
- Output: 5

Answer: The output is $3+2=5$.

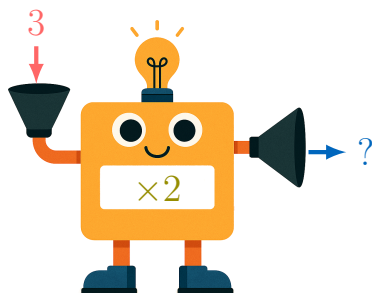
Ex 2:



- Rule: subtract 3
- Input: 5
- Output: 2

Answer: The output is $5-3=2$.

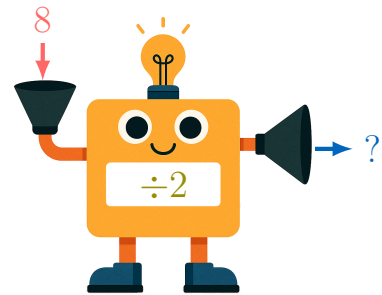
Ex 3:



- Rule: multiply by 2
- Input: 3
- Output: 6

Answer: The output is $3 \times 2 = 6$.

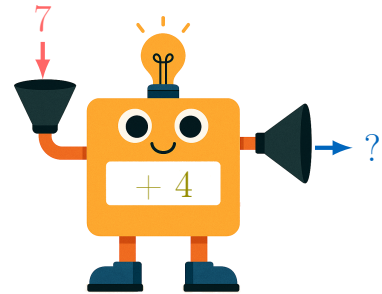
Ex 4:



- Rule: divide by 2
- Input: 8
- Output: 4

Answer: The output is $8 \div 2 = 4$.

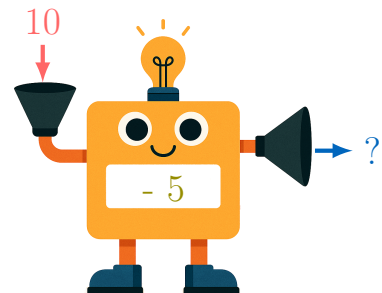
Ex 5:



- Rule: add 4
- Input: 7
- Output: 11

Answer: The output is $7+4=11$.

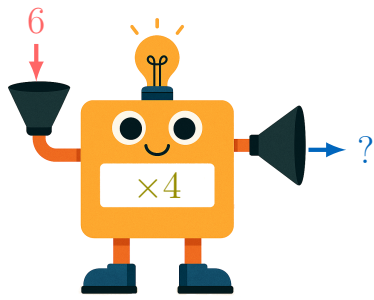
Ex 6:



- Rule: subtract 5
- Input: 10
- Output: 5

Answer: The output is $10-5=5$.

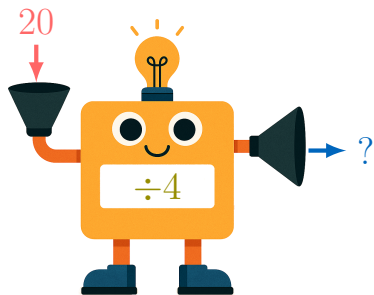
Ex 7:



- Rule: multiply by 4
- Input: 6
- Output: 24

Answer: The output is $6 \times 4 = 24$.

Ex 8:



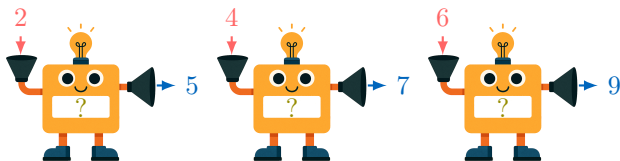
- Rule: divide by 4
- Input: 20
- Output: 5

Answer: The output is $20 \div 4 = 5$.

A.2 FINDING THE RULE OF A FUNCTION

Ex 9: For these inputs and outputs, find the rule:

Input	2	4	6
Output	5	7	9



Rule: Add 3

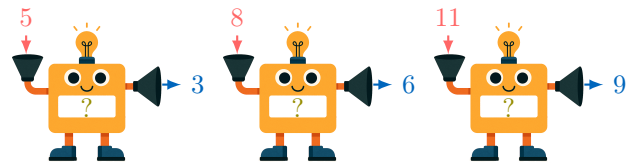
Answer:

- $2 + 3 = 5$
- $4 + 3 = 7$
- $6 + 3 = 9$

So, the rule is add 3.

Ex 10: For these inputs and outputs, find the rule:

Input	5	8	11
Output	3	6	9



Rule: Subtract 2

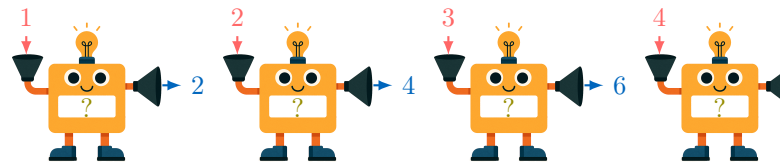
Answer:

- $5 - 2 = 3$
- $8 - 2 = 6$
- $11 - 2 = 9$

So, the rule is subtract 2.

Ex 11: For these inputs and outputs, find the rule:

Input	1	2	3	4
Output	2	4	6	8



Rule: Multiply 2

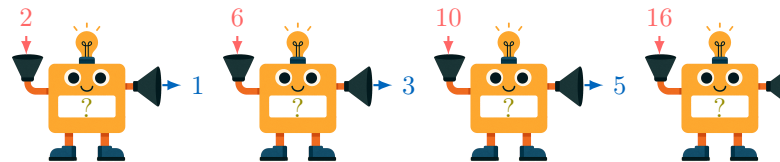
Answer:

- $1 \times 2 = 2$
- $2 \times 2 = 4$
- $3 \times 2 = 6$
- $4 \times 2 = 8$

So, the rule is multiply by 2.

Ex 12: For these inputs and outputs, find the rule:

Input	2	6	10	16
Output	1	3	5	8



Rule: Divide 2

Answer:

- $2 \div 2 = 1$
- $6 \div 2 = 3$
- $10 \div 2 = 5$
- $16 \div 2 = 8$

So, the rule is divide by 2.