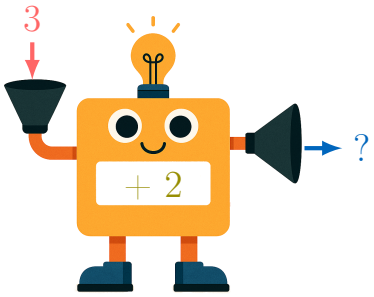
FUNCTIONS

A DEFINITION

A.1 CALCULATING THE OUTPUT OF A FUNCTION

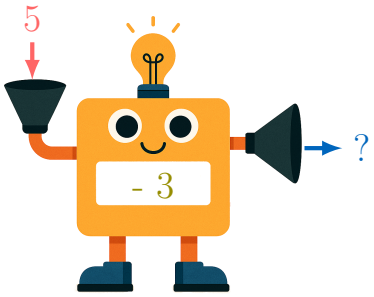
Ex 1:



- Rule: add 2
- Input: 3
- Output: $\boxed{5}$

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

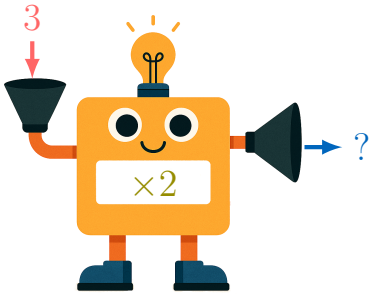
Ex 2:



- Rule: subtract 3
- Input: 5
- Output: $\boxed{2}$

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

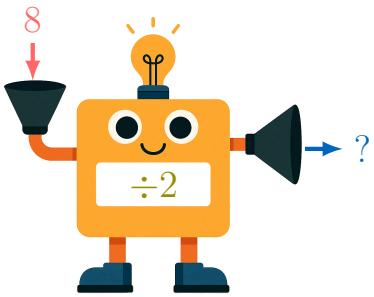
Ex 3:



- Rule: multiply by 2
- Input: 3
- Output: $\boxed{6}$

Answer: The output is $3\times2=6$.

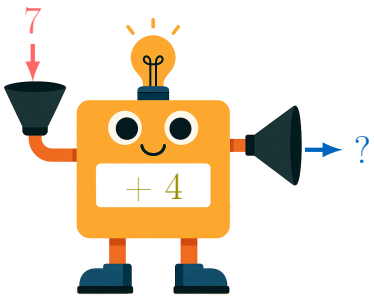
Ex 4:



- Rule: divide by 2
- Input: 8
- Output: $\boxed{4}$

Answer: The output is $8\div2=4$.

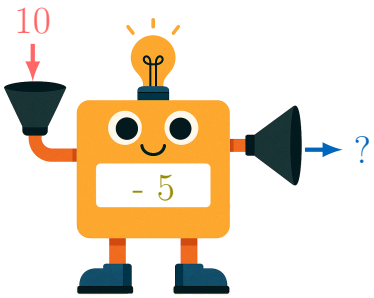
Ex 5:



- Rule: add 4
- Input: 7
- Output: $\boxed{11}$

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

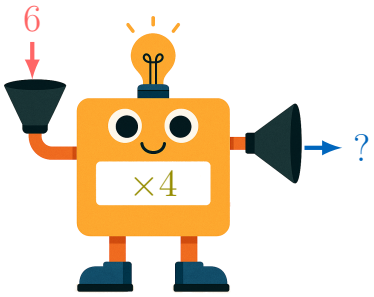
Ex 6:



- Rule: subtract 5
- Input: 10
- Output: $\boxed{5}$

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

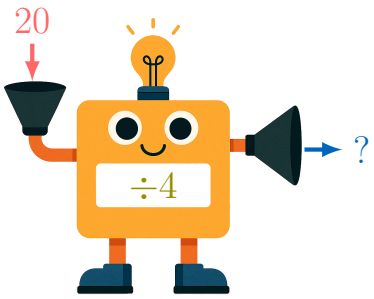
Ex 7:



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

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

Ex 8:



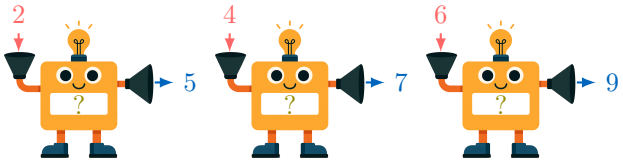
- Rule: divide by 4
- Input: 20
- Output: 5

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

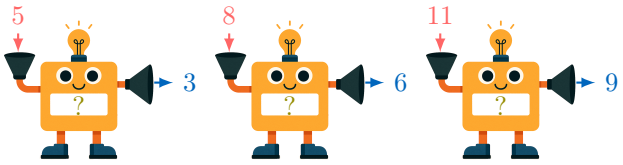
Answer:

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

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

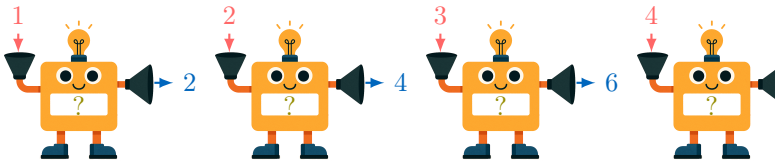
Answer:

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

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

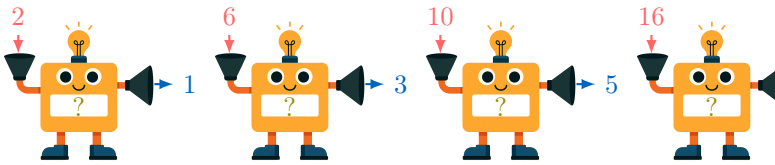
Answer:

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

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

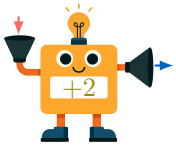
Answer:

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

So, the rule is divide by 2.

B TABLE OF VALUES

B.1 CALCULATING THE OUTPUTS OF A FUNCTION

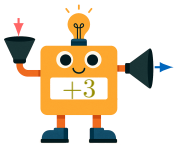


Ex 13: For the rule "add 2", , complete the table of values:

Input	2	3	4
Output	4	5	6

Answer:

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

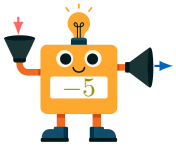


Ex 14: For the rule "add 3", , complete the table of values:

Input	0	5	10
Output	3	8	13

Answer:

- $0+3=3$
- $5+3=8$
- $10+3=13$

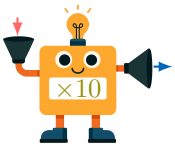


Ex 15: For the rule "subtract 5", , complete the table of values:

Input	6	12	20
Output	1	7	15

Answer:

- $6-5=1$
- $12-5=7$
- $20-5=15$

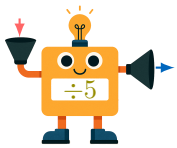


Ex 16: For the rule "multiply by 10", , complete the table of values:

Input	2	5	20
Output	20	50	200

Answer:

- $2\times10=20$
- $5\times10=50$
- $20\times10=200$



Ex 17: For the rule "divide by 5", , complete the table of values:

Input	5	10	20
Output	1	2	4

Answer:

- $5\div5=1$
- $10\div5=2$
- $20\div5=4$