

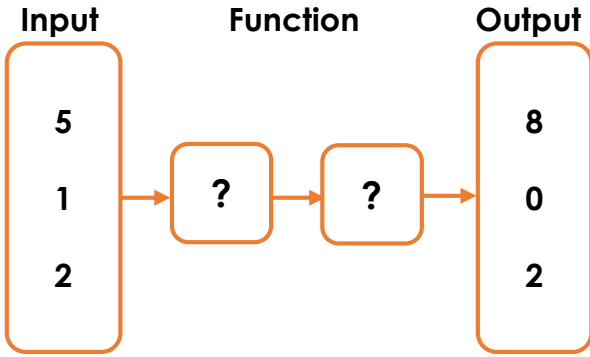
**Week 15**

**Tuesday 30th June 2020**

**Year 6 Two-Step Algebraic Rule -  
Reasoning and Problem Solving**

## Find a Rule – Two Step

1a. Ned put some numbers into a function machine.



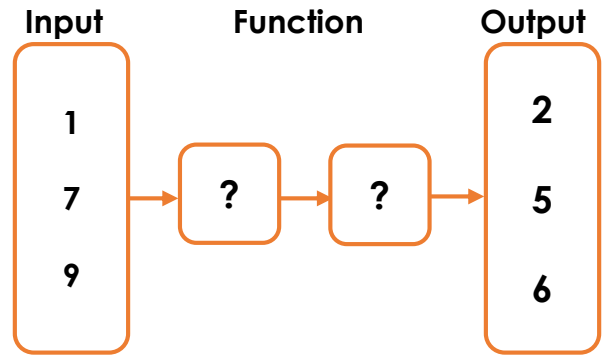
What is the output when the input is 4?



6 PS

## Find a Rule – Two Step

1b. Kate put some numbers into a function machine.



What is the output when the input is 13?



6 PS

2a. True or false? Explain your answer.

Input	Output
2	9
5	15



I think that the function is  $+ 16$  and then  $\div 2$  because  $2 + 16$  then  $\div 2$  is 9.



6 R

2b. True or false? Explain your answer.

Input	Output
10	16
8	12

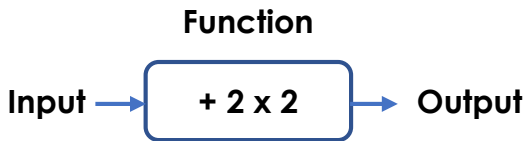


I think that the function is  $\div 2$  and then  $+ 11$  because  $10 \div 2$  then  $+ 11$  is 16.



6 R

3a. Fatima is using this function machine.



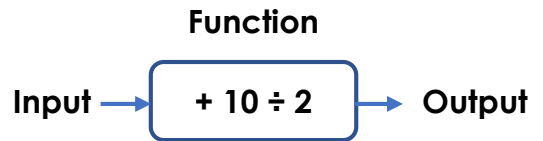
She puts a number into the function machine. She then puts the output back into the machine. She now has the output of 16.

What was Fatima's original number?



6 PS

3b. Jude is using this function machine.



He puts a number into the function machine. He then puts the output back into the machine. He now has the output of 8.

What was Jude's original number?

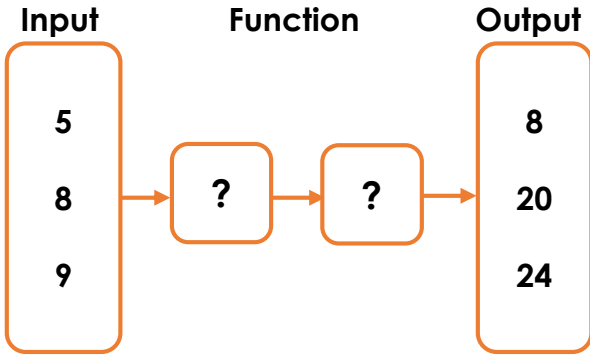


6 PS

## Find a Rule – Two Step

## Find a Rule – Two Step

4a. Millie put some numbers into a function machine.

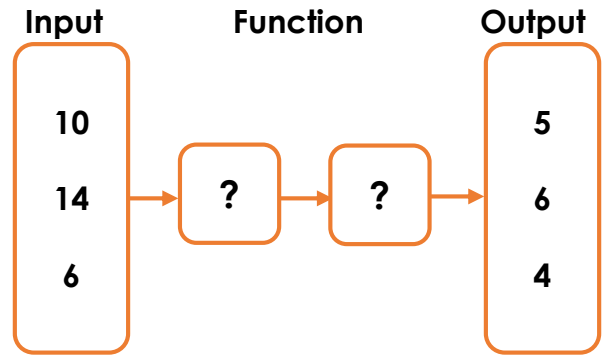


What is the output when the input is 12?



6 PS

4b. Iqra put some numbers into a function machine.



What is the output when the input is 30?



6 PS

5a. True or false? Explain your answer.

Input	Output
6	5
8	6



I think that the function is  $\div 3$  and then add 3 because  $6 \div 3$  then  $+ 3$  is 5.



6 R

5b. True or false? Explain your answer.

Input	Output
11	17
7	9

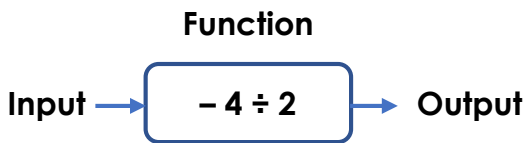


I think that the function is  $+ 11$  and then  $\div 2$  because  $7 + 11$  then  $\div 2$  is 9.



6 R

6a. Eesa is using this function machine.



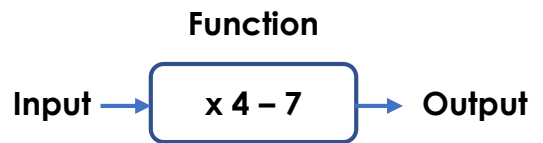
He puts a number into the function machine. He then puts the output back into the machine. He now has the output of 1.

What was Eesa's original number?



6 PS

6b. Jake is using this function machine.



He puts a number into the function machine. He then puts the output back into the machine. He now has the output of 13.

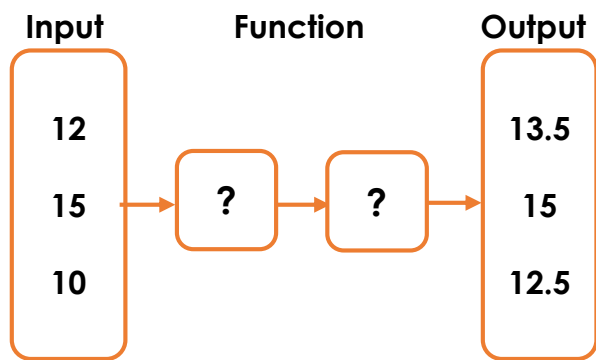
What was Jake's original number?



6 PS

## Find a Rule – Two Step

7a. Toby put some numbers into a function machine.



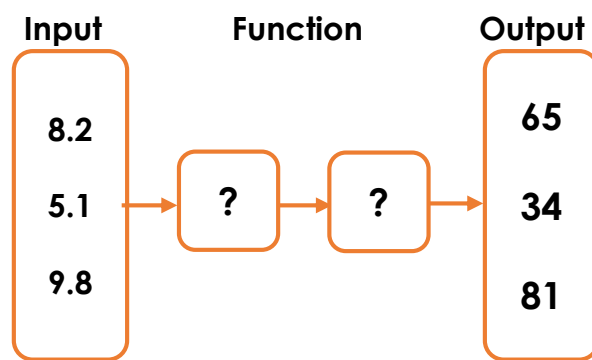
What is the output when the input is 52?



6 PS

## Find a Rule – Two Step

7b. Ivy put some numbers into a function machine.



What is the output when the input is 27?



6 PS

8a. True or false? Explain your answer.

Input	Output
7	2.7
3	2.3



I think that the function is  $x \times 2$  and then subtract 3.7 because  $3 \times 2$  then  $- 3.7$  is 2.3.



6 R

8b. True or false? Explain your answer.

Input	Output
10	13
25	16

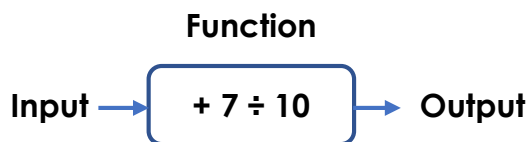


I think that the function is  $x \times 2$  and then  $- 7$  because  $10 \times 2$  then  $- 7$  is 13.



6 R

9a. Jaiden is using this function machine.



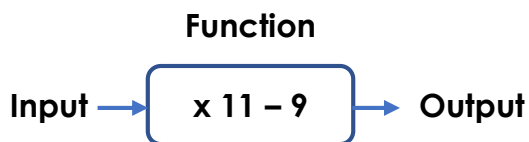
He puts a number into the function machine. He then puts the output back into the machine. He now has the output of 0.82.

What was Jaiden's original number?



6 PS

9b. Lucy is using this function machine.



She puts a number into the function machine. She then puts the output back into the machine. She now has the output of 255.

What was Lucy's original number?



6 PS