

25.01.22

WALT: Algebra – find a rule (1 step)

Fluency

- 1 Whitney makes a pattern of triangles using sticks.

Complete the table below.

							
Number of triangles	1	2	3	4	5	10	
Number of sticks							90

- 3 Calculate the outputs for the function machines below.

a) input 50 → $+ 5$ → output

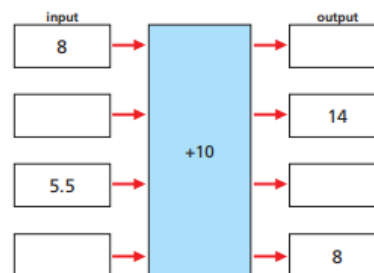
b) input 50 → $- 7$ → output

c) input 50 → $\times 2$ → output

d) input 50 → $\div 10$ → output

Varied fluency continued...

- 6 Calculate the missing inputs and outputs for the function machine.



Reasoning

- 8 Here is a function machine.



Dora

The rule is add 9



Dexter

The rule is multiply by 2.5

Who do you agree with?

Explain your answer.

Varied Fluency

- 4 Calculate the inputs for the function machines.

a) input → $+ 9$ → output 45

b) input → $- 2$ → output 21

c) input → $\times 10$ → output 350

d) input → $\div 3$ → output 9

- 5 Write the missing functions in the function machines.

a) input 2 → → output 10

input 5 → → output 25

input 10 → → output 50

b) input 8 → → output 15

input 0 → → output 7

input -3 → → output 4

- 2 Complete the tables.



To find the number of wheels, you multiply the number of bicycles by 2

a)

Number of bicycles	1	2	5			16
Number of wheels	2			18	24	

b)

Number of ants	1	2	5			16
Number of legs		12		18	24	

Explain how to find the number of legs.

Problem Solving

- 9 In a function machine, if the input is 3 and the output is 12, what could the function be?

Write two different functions and complete the table of outputs for each function.



Input	3	4	5	10	20	100
Output	12					

Finished? Create your own function machine to show some data of your choosing.

