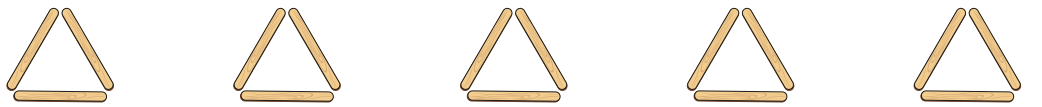


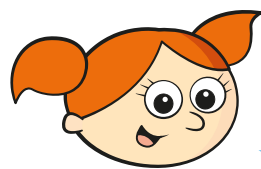
# Find a rule – one step

- 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 |

- 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 |    |

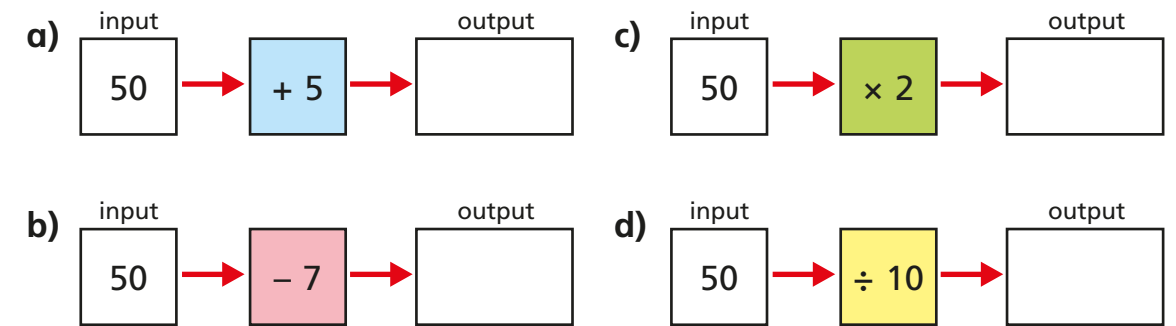
Explain how to find the number of legs.

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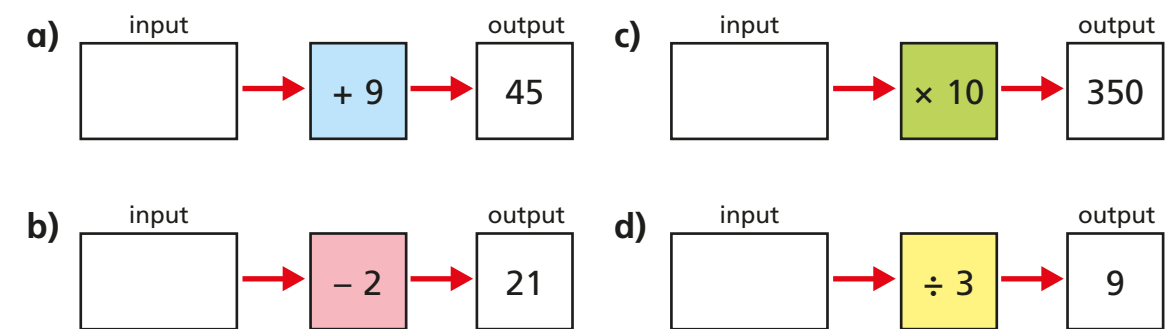


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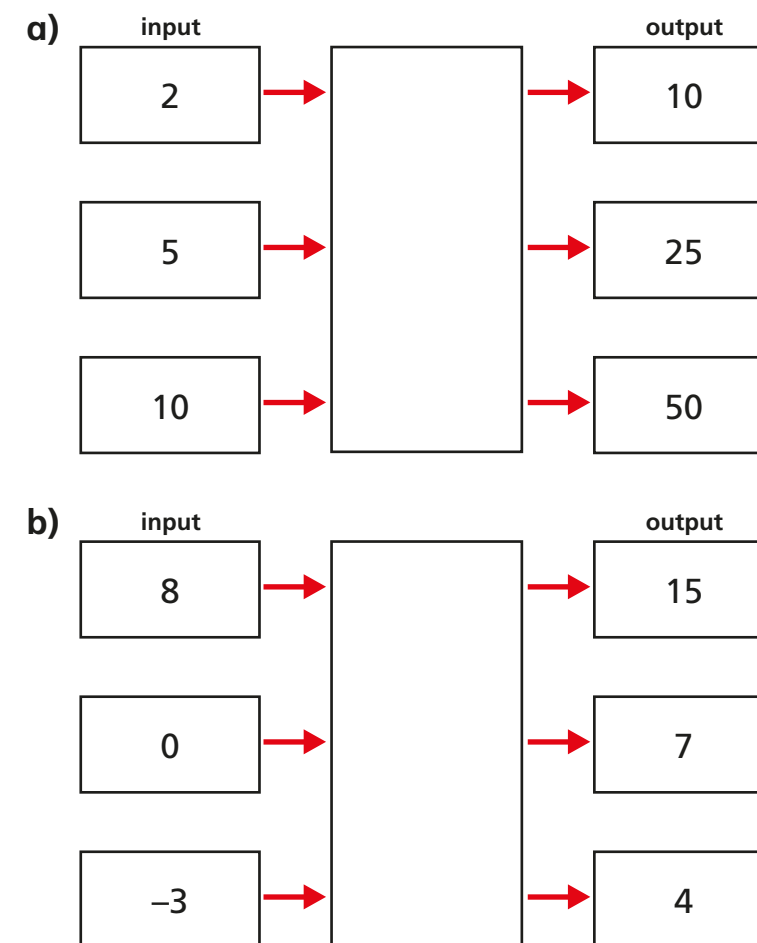
- 3 Calculate the outputs for the function machines below.



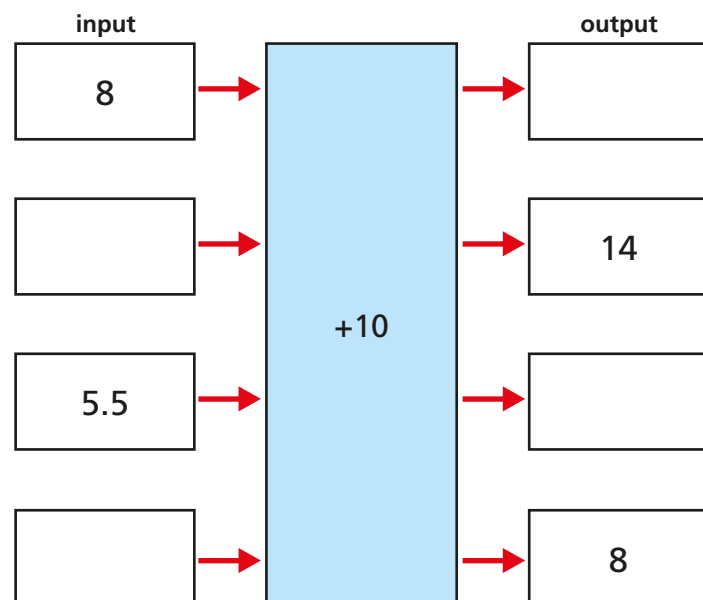
- 4 Calculate the inputs for the function machines.



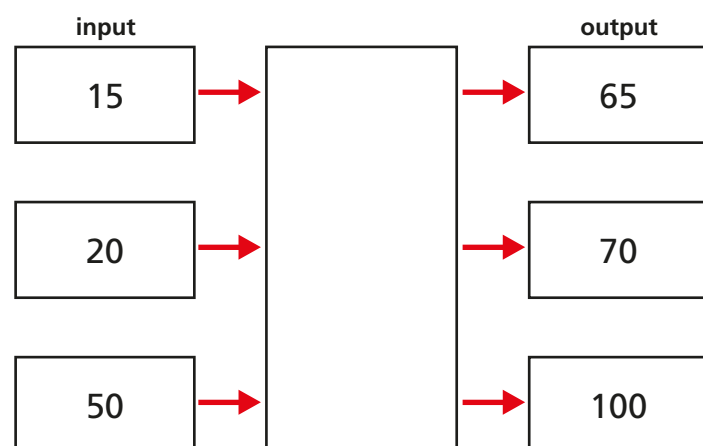
- 5 Write the missing functions in the function machines.



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



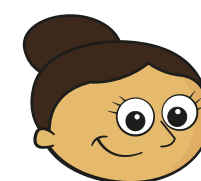
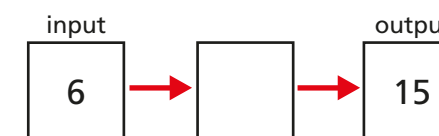
7 Look at the function machine.



a) What is the output, if the input is zero?

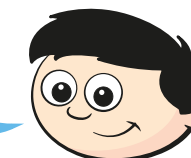
b) What is the input, if the output is zero?

8 Here is a function machine.



Dora

The rule is add 9



Dexter

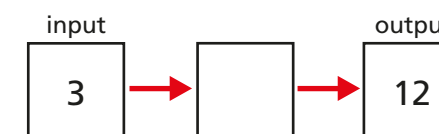
The rule is multiply by 2.5

Who do you agree with? \_\_\_\_\_

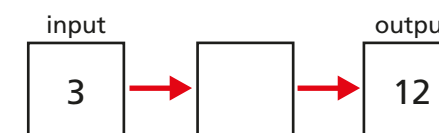
Explain your answer.

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 |   |   |    |    |     |



| Input  | 3  | 4 | 5 | 10 | 20 | 100 |
|--------|----|---|---|----|----|-----|
| Output | 12 |   |   |    |    |     |