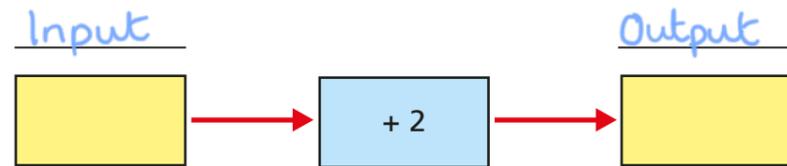
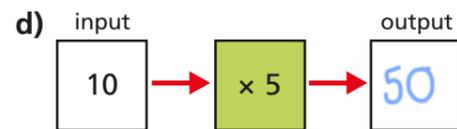
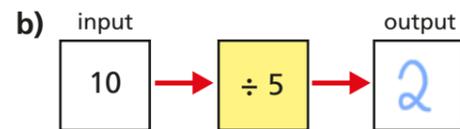
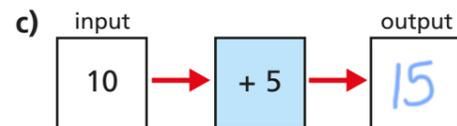
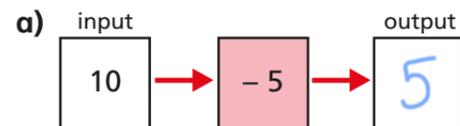


Single function machines (number)

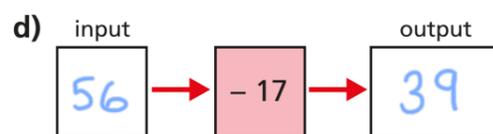
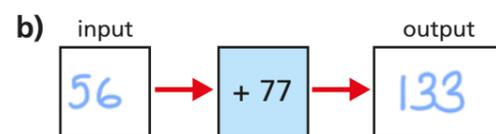
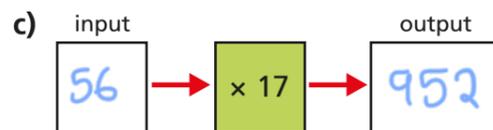
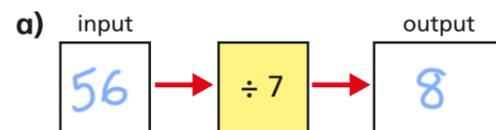
1 Label the function machine using the words input and output.



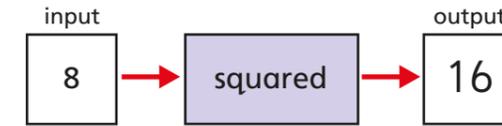
2 Complete the function machines.



3 The input for each function machine is 56
Complete the function machines.

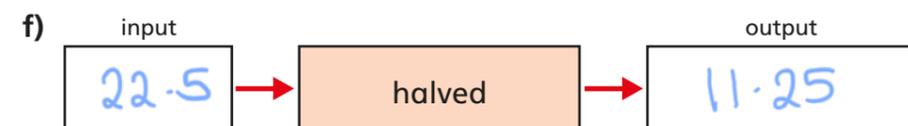
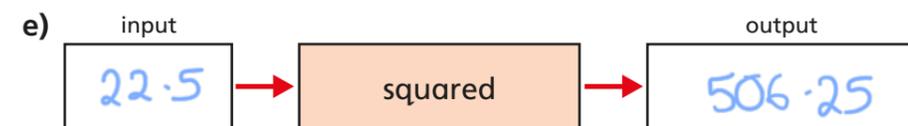
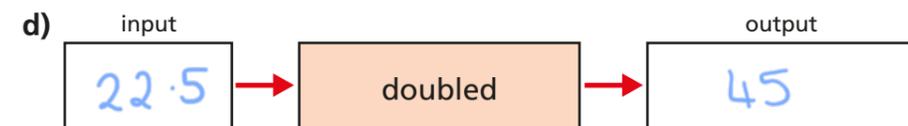
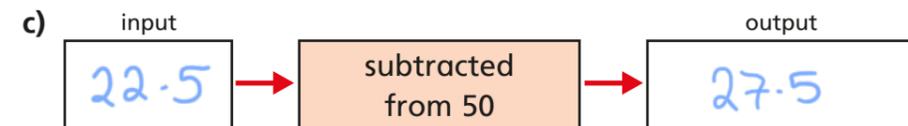
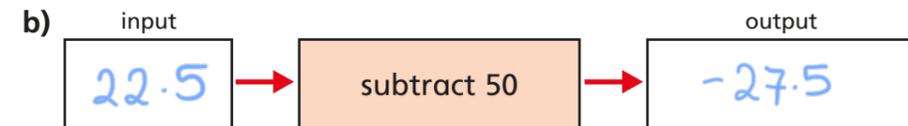
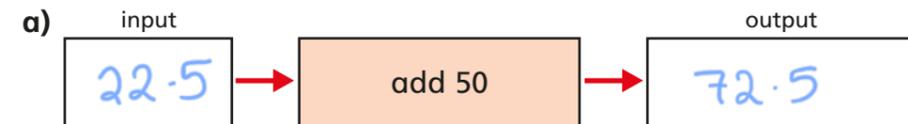


4 Tommy has calculated the output for this function machine.
Tommy's answer is incorrect. What mistake has he made?

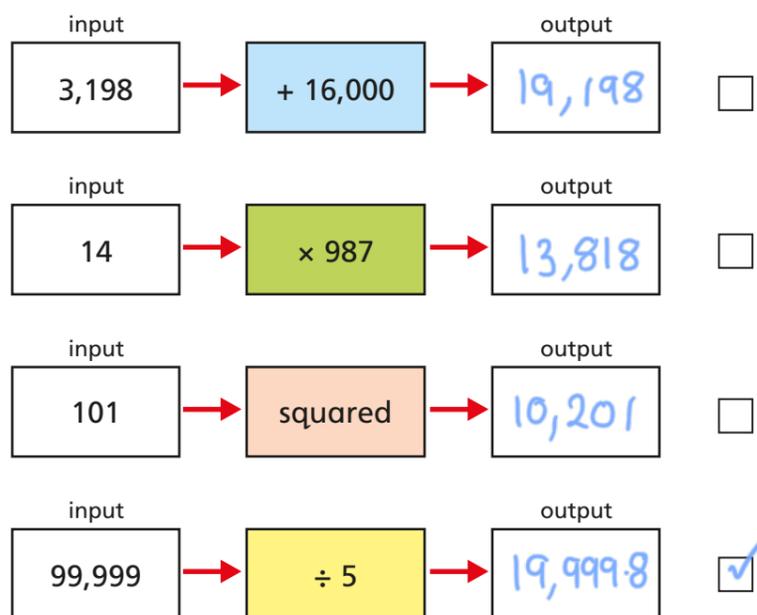


He has doubled 8 not squared it.

5 Find the output if 22.5 is the input. Complete the function machines.

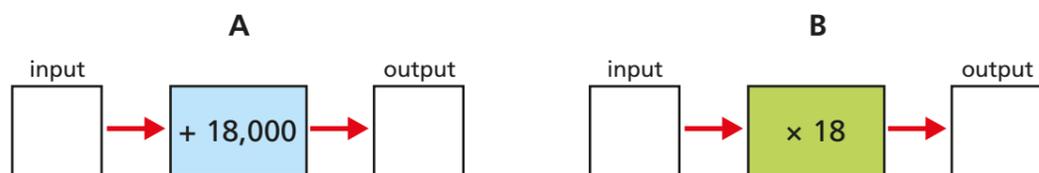


- 6 Estimate which of the function machines will give the biggest output.
Tick your answer.



Work out the output of each function machine to check your estimate.

- 7 Here are 2 function machines.



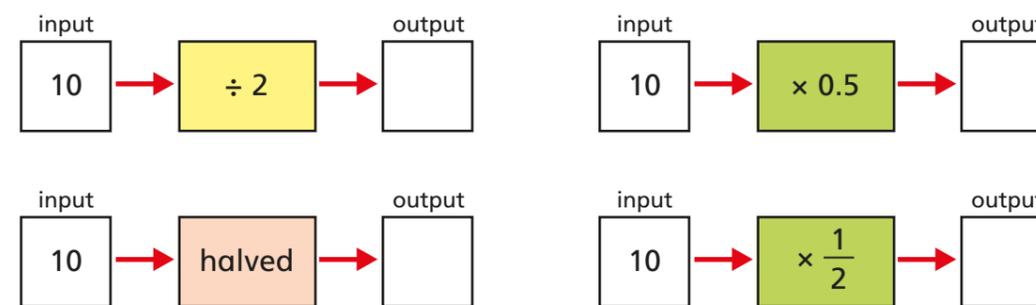
- a) Find an input so that function machine A has the biggest output.
- b) Find an input so that function machine B has the biggest output.
- c) Find an input for each function machine so that both functions have the same output.

E.g.

E.g.

$$\frac{18,000}{17}$$

- 8 Dora thinks each of these function machines will give the same output for any input.
Is she correct? Explain your reasoning.



Yes they are all equivalent.

- 9 a) Draw as many function machines as possible that give an output of 64 when the input is 8

E.g.

$8 \rightarrow \times 8 \rightarrow 64$

$8 \rightarrow + 56 \rightarrow 64$

$8 \rightarrow \text{squared} \rightarrow 64$

- b) How many different function machines can you think of that give the same output for a given input?

Various answers.