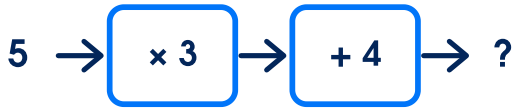
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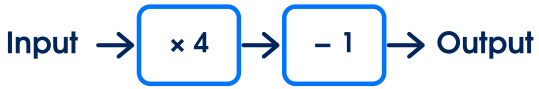
Function machines

1 Here is a function machine.



Work out the output when the input is 5.

2 Here is a function machine.



Complete the table.

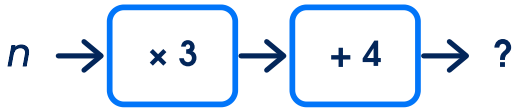
Input	1	3		10
Output	3		31	

3 Machine 1: – 4 then × 2
Machine 2: × 2 then – 4

Lucy says the two machines always give the same output.

Use an input of 10 to show that Lucy is wrong.

4 Here is a function machine.



(a) Write an expression for the output when the input is n.

(b) The output is 28. Show that the input was 8.

5 Machine A: × 3 then + 4
Machine B: × 5 then – 6

The same number is put into both machines. The outputs are equal.

Work out the number.

6 The rule for a machine is "× 3 then + 5".

The output is 41.

(a) Write the inverse rule.

(b) Work out the input.

Mr&Mrs MATHS

ANSWERS · REVISION MAT 1

Function machines

1 **19**

2

Input	1	3	**8**	10
Output	3	**11**	31	**39**

3 Machine 1: **12**

Machine 2: **16**

These are different, so the order matters ✓

4 (a) **$3n + 4$**

(b) Work backwards: 28 → 8 ✓

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

$-2x = -10$

$x = 5$

6 (a) **– 5 then ÷ 3**

(b) (41 – 5) ÷ 3 = **12**

Mr&Mrs MATHS