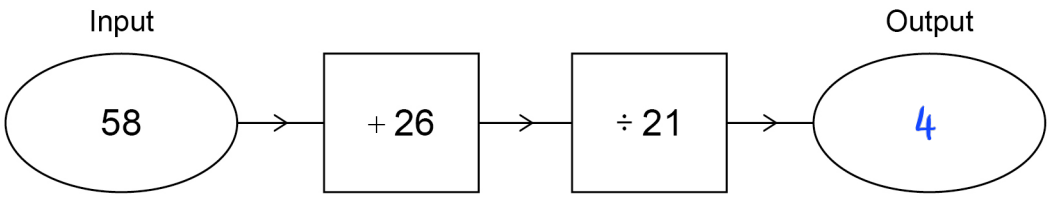
1 (a) Here is a number machine.



Work out the output.

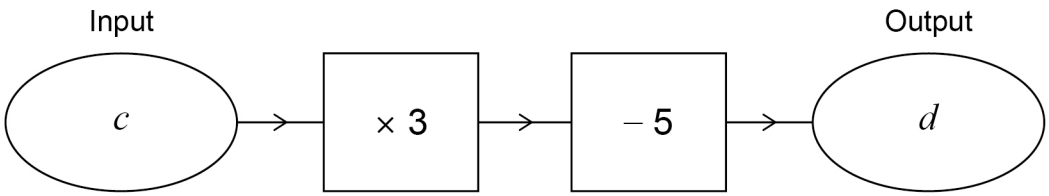
[1 mark]

58 + 26 = 84

84 ÷ 21 = 4

Answer 4 (1)

1 (b) Here is a different number machine.



Work out a formula for d in terms of c.

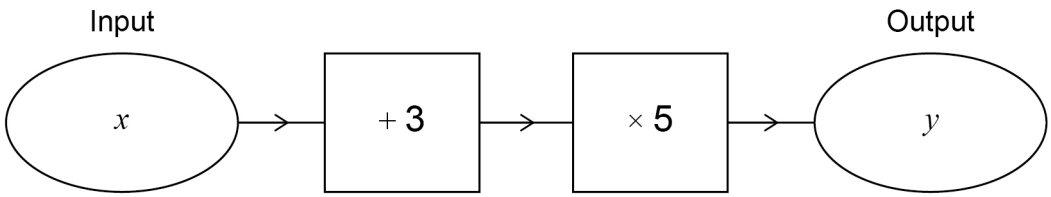
[2 marks]

3c − 5 = d

Answer d = 3c − 5 (1)

2 Luke wants to make a number machine so that $y = 5x + 3$

Here is his attempt.



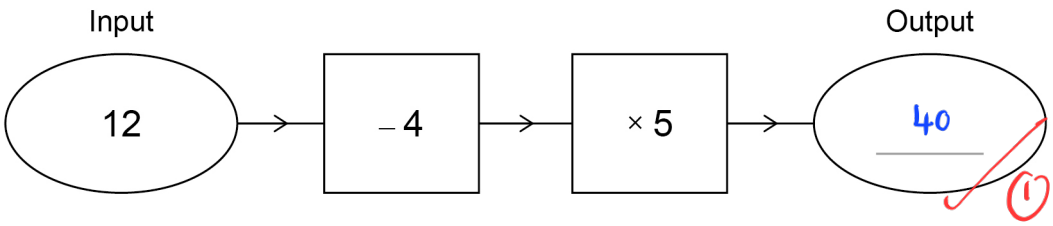
What mistake has he made?

[1 mark]

It should be ×5 then +3 in the equation.

(1)

3 (a) Here is a number machine.



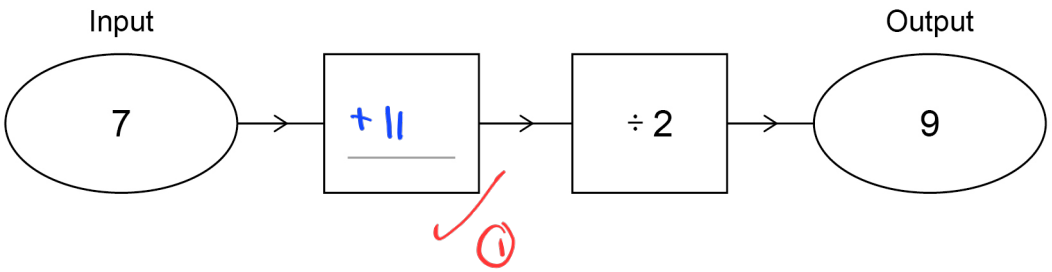
Complete the number machine.

[1 mark]

(12 − 4) × 5

= 8 × 5 = 40

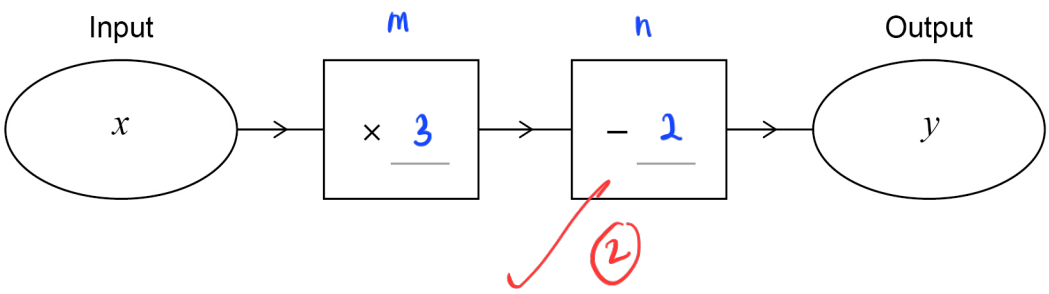
3 (b) Here is a different number machine.



Complete the number machine.

[1 mark]

3 (c) Here is a different number machine.



(2)

When $x = 5$ $y = 13$

and

when $x = 10$ $y = 28$

Complete the number machine.

[2 marks]

$5m - n = 13$ — (1) $10m - n = 28$ — (2)

(2) − (1) : $10m - 5m = 28 - 13$

$5m = 15$

$m = 3$ $n = 5(3) - 13 = 2$