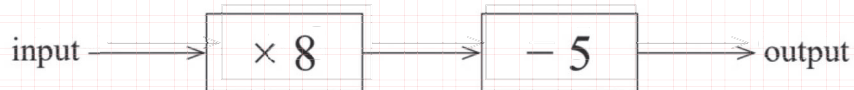


Total: 20 sweets
 Harry has left: $20 - 7 = 13$ sweets

$$\frac{13}{20}$$

$$\frac{13}{20}$$

1. Here is a number machine.

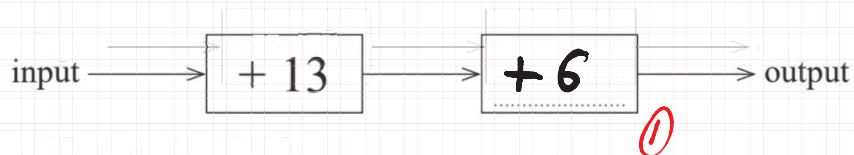


- (a) Work out the output when the input is 6

$$(6 \times 8) - 5 = 48 - 5 = 43$$

43 (1)

Here is a different number machine.



When the input is 17, the output is 10

- (b) Complete the number machine.

$$(17 + 13) \boxed{?} = 10 \Rightarrow 4 \boxed{+6} = 10$$

(1)

2. The diagram shows a number machine.



- (a) Find the output when the input is 7

$$7 \times 2 = 14$$

$$14 - 3 = 11$$

$$\underline{11} \quad \checkmark$$

(1)

- (b) Find the input when the output is 41

for an input n , output = $2n - 3$ ✓

$$41 = 2n - 3$$

$$\begin{array}{l} +3 \downarrow \\ 44 = 2n \end{array} \quad \begin{array}{l} \downarrow +3 \\ \downarrow +3 \end{array}$$

$$\begin{array}{l} \div 2 \downarrow \\ n = \frac{44}{2} \end{array} \quad \begin{array}{l} \downarrow \div 2 \\ \downarrow \div 2 \end{array}$$

$$= 22$$

$$\underline{22} \quad \checkmark$$

(2)

(Total for Question is 3 marks)