

Find functions from expressions (2-step)

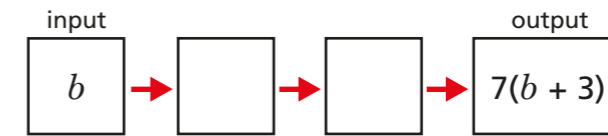
1 Complete the function machines with the correct number and operation.

a) input g → $\times 4$ → <input type="text"/> → output $4g + 3$	d) input h → <input type="text"/> → $+ 5$ → output $\frac{h}{2} + 5$
b) input m → <input type="text"/> → $+ 3$ → output $2m + 3$	e) input p → $- 6$ → <input type="text"/> → output $\frac{p - 6}{4}$
c) input y → $\times 8$ → <input type="text"/> → output $8y - 5$	f) input k → <input type="text"/> → $\div 7$ → output $\frac{k - 6}{7}$

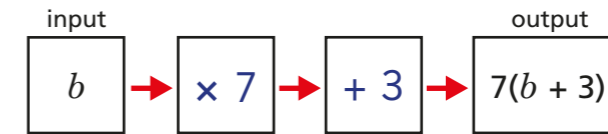
2 Complete the function machines.

a) input h → <input type="text"/> → <input type="text"/> → output $5h + 2$	c) input a → <input type="text"/> → <input type="text"/> → output $\frac{a}{8} + 6$
b) input h → <input type="text"/> → <input type="text"/> → output $\frac{h}{5} + 2$	d) input a → <input type="text"/> → <input type="text"/> → output $8a + 6$

3 Alex is completing this function machine.



She fills in the gaps like this.



Explain the mistake Alex has made.

4 Complete these 2-step function machines.

a) input k → <input type="text"/> → <input type="text"/> → output $6(k + 2)$	input k → <input type="text"/> → <input type="text"/> → output $6k + 2$
b) input m → <input type="text"/> → <input type="text"/> → output $8m - 3$	input m → <input type="text"/> → <input type="text"/> → output $8(m - 3)$
c) input p → <input type="text"/> → <input type="text"/> → output $\frac{p + 4}{7}$	input p → <input type="text"/> → <input type="text"/> → output $\frac{p}{7} + 4$
d) input r → <input type="text"/> → <input type="text"/> → output $\frac{r}{6} - 5$	input r → <input type="text"/> → <input type="text"/> → output $\frac{r - 5}{6}$

What is the same and what is different about each pair of function machines?

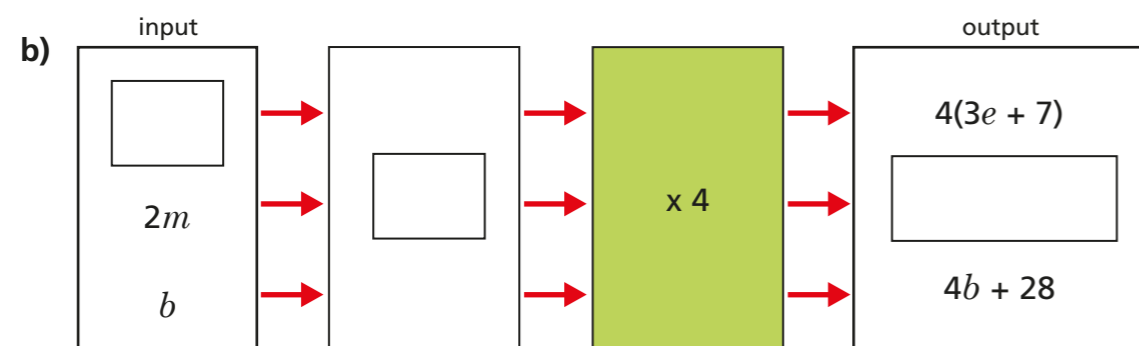
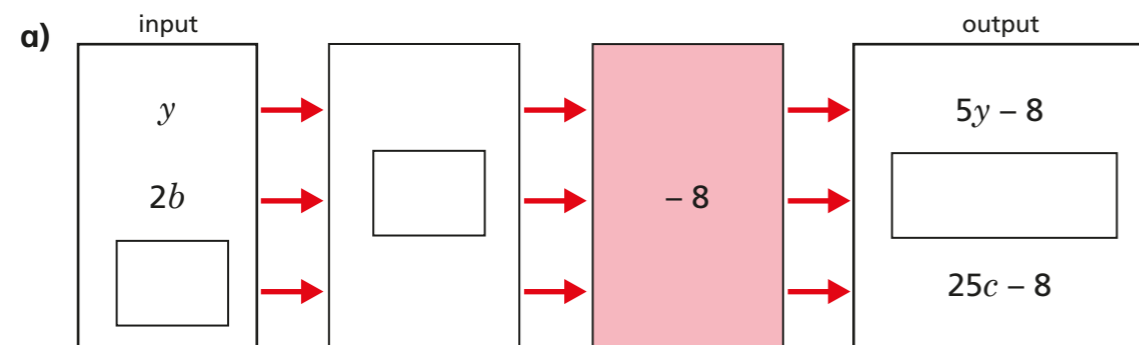


5 Draw a 2-step function machine that has an input of y and gives an output of $\frac{y}{3} + 5$

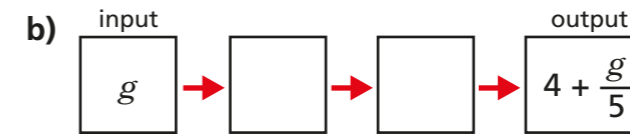
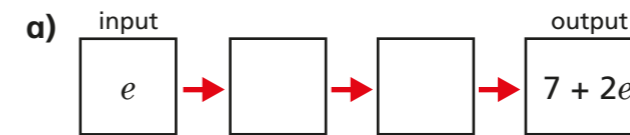
Draw a 2-step function machine that has an input of y and gives an output of $\frac{y+5}{3}$

What is the same and what is different about each of the function machines?

6 Complete the function machines.



7 Complete these 2-step function machines.



8 Here is a function machine.



Which of these expressions shows the output? Tick your answer.

$2x - 10$

$10 - 2x$

Explain your answer.

