

Functions and mappings

- Constructing a mapping diagram from a function machine

Keywords

You should know

explanation 1

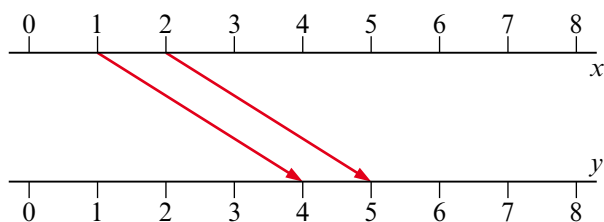
1 In these questions mappings are given using algebra.

- Write each mapping as a function machine.
- Copy and complete each table and mapping diagram.

a i $x \rightarrow x + 3$

ii

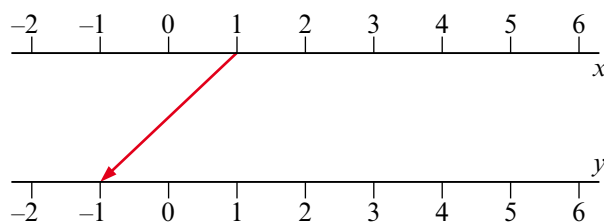
Input	Output
1	4
2	5
3	
4	
5	



b i $x \rightarrow x - 2$

ii

Input	Output
1	-1
2	
3	
4	
5	



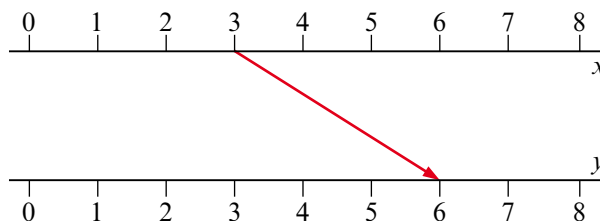
2 For each mapping below:

- i** write the mapping as a function machine.
- ii** copy and complete the table and mapping diagram.

a i $x \rightarrow 2x$

ii

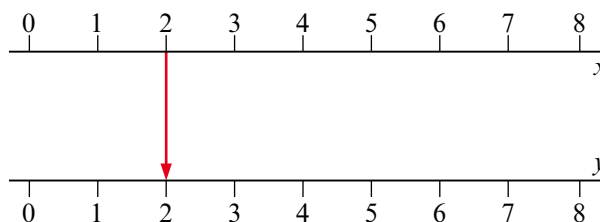
Input	Output
0	
1	
2	
3	6
4	



b i $x \rightarrow 2x - 2$

ii

Input	Output
1	
2	2
3	
4	
5	



3 What do you notice about the lines in your mappings for questions **1** and **2**?

4 For each of the mappings below:

- i** write the mapping as a function machine
- ii** draw a table of inputs and outputs for input values 1, 2, 3, 4, and 5
- iii** draw a mapping diagram

a $x \rightarrow -x$

b $x \rightarrow -x + 2$

c $x \rightarrow -2x$

d $x \rightarrow -2x + 3$