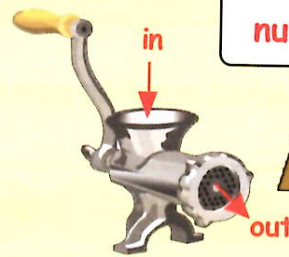


Number Machines

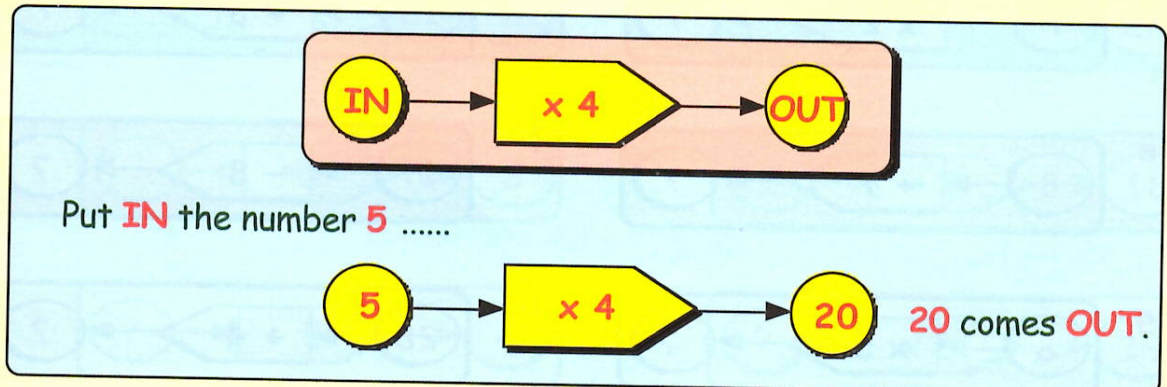
A **number machine** (or **function machine**) is the name for a mathematical rule which changes **one number** into **another**.



Be able to change one number into another using a number machine.

Example

The number machine shown below takes a number **IN** one side, multiplies it by 4 and pushes it **OUT** the other side.



Exercise 5

1. Use the $\times 4$ number machine shown above to find :-

a What comes **OUT** when you put in the number :-

- (i) 3 (ii) 8 (iii) 10 (iv) 25 ?

b What number must have been put **IN** to get the answer :-

- (i) 16 (ii) 28 (iii) 44 (iv) 120 ?

2. Here is a new number machine :-



a What comes **OUT** when you put in the number :-

- (i) 7 (ii) 13 (iii) 20 (iv) 25 ?

b What number must have been put **IN** to get the answer :-

- (i) 2 (ii) 14 (iii) 29 (iv) 94 ?