

FINDING A HIDDEN RULE

- 1 The table shows in 1 → out 4 and in 2 → out 5.
- 2 $1 + 3 = 4$ and $2 + 3 = 5$, so the rule is add 3.
- 3 Use the rule: $3 + 3 = 6$, so out is 6.

In	1	2	3
Out	4	5	

WARM-UP

Fill in the two-column input-output table for the 'add 5' game machine.



1. Write the rule 'add 5' at the top and label the columns input and output.
2. Put the inputs 3, 6, 9 and 0 in the input column.
3. Work out and write each output beside its input in the output column.

PRACTICE

- 1 In the arcade a scoring machine adds 5 to every score fed in. Padraig sends in a score of 7. What score comes out?
- 2 The same 'add 5' game machine now gets a score of 6 pushed in. What score does it show coming out?
- 3 A doubling game piles up your points, so its rule is 'multiply by 2'. Niamh puts in 8 points. How many come out?
- 4 A treble-token machine has the rule times 3. The children feed in 3, then 6, then 9, then 0 tokens. Write the four outputs.
- 5 A mystery machine on the games board shows 13 comes out as 20, 15 comes out as 22, and 17 comes out as 24. What one rule is it using?

SPOT THE MISTAKE

Cian reads this input-output table and writes a rule:

in 1 → out 5
 in 2 → out 6
 in 3 → out 7
 Rule: $\times 5$

Cian's rule is wrong. What is the correct rule? What comes out when the input is 4?

REFLECT

Once you spotted a rule, did you test it on another row before filling the gaps?