

Finding the rule from a table

MODULE 8 · ALGEBRA — PATTERNS, EXPRESSIONS AND EQUATIONS

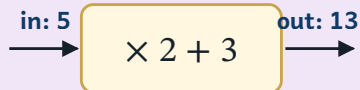
ALGEBRA

HOW TO ANSWER TODAY

- Find the rule. Look at how each input changes to its output. Try $\times$ first, then $+$ or $-$.
 $3 \rightarrow 6, 5 \rightarrow 10, 7 \rightarrow 14 \rightarrow$ rule is $\times 2$

TRY IT ON THE LINE

Read the table of values. Try each candidate rule on the first two rows; the rule that works on EVERY row is the answer.



- Table: $1 \rightarrow 5, 2 \rightarrow 7, 3 \rightarrow 9, 4 \rightarrow 11$. Rule = _____
- Table: $1 \rightarrow 1, 2 \rightarrow 4, 3 \rightarrow 9, 4 \rightarrow 16$. Rule = _____
- Table: $0 \rightarrow 3, 1 \rightarrow 4, 2 \rightarrow 7, 3 \rightarrow 12$. Rule = _____

PRACTICE

1



Cian is making a points chart for 5th class on the noticeboard. Every pupil starts the week with 10 bonus stickers, then earns extra stickers for reading. He writes the totals so far: $8 \rightarrow 18$, $3 \rightarrow 13$, $7 \rightarrow 17$. What rule turns the reading stickers into the total stickers on the chart?

2



Saoirse and her brother do extra jobs at home each week. For every euro Saoirse earns from chores, her parents top it up with the same bonus so she ends up with more. When Saoirse earned €6 she got €17, when she earned €8 she got €19, and when she earned €1 she got €12. What is the rule for working out her total from her chore money?

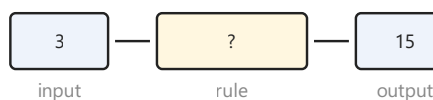
CHALLENGE

1



Cian is selling raffle tickets for the 5th class GAA fundraiser. Each book of tickets costs the same in euros, plus a fixed booklet fee added to every order. His sales notebook shows: 9 books $\rightarrow$ €58; 6 books $\rightarrow$ €40; 8 books $\rightarrow$ €52. What is the rule linking the number of books to the total cost?

2



Granny pays Niamh pocket money for helping with the calves at the farm. She uses a rule based on the number of calves Niamh feeds: 3 calves earns €15, 9 calves earns €33, and 10 calves earns €36. What is the rule?