

Describing a rule in words

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 $-$.

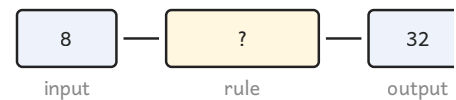
$3 \rightarrow 6$, $5 \rightarrow 10$, $7 \rightarrow 14 \rightarrow$ rule is $\times 2$

★ STRETCH PROBLEMS

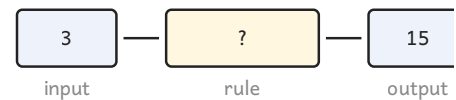
- 1 At the school athletics sports day, Cian's points depend on how many beanbags he lands in the hoop. Landing **7** beanbags scores **23** points, **5** beanbags score **17** points and **10** beanbags score **32** points. What is the rule that maps the number of beanbags to the points?



- 2 Mr Ó Broin is in the photocopier room getting worksheet packs ready for tomorrow. For each pupil, he prints a set number of sheets and then adds the same number of extra cover sheets to the pile. The pile sizes go **8** $\rightarrow$ **32**, **3** $\rightarrow$ **17** and **7** $\rightarrow$ **29** pupils to total sheets. What is the rule that turns the number of pupils into the total number of sheets?



- 3 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?



- 4 Tadhg tries a mystery number machine in 5th class. Putting in **2** gives **14**, putting in **10** gives **54**, and putting in **7** gives **39**. What is the rule that maps each input to its output?



- 5 Oisín plays a counting-down game at the pond in Wicklow. After **1 minute** his score is **14**, after **2 minutes** it is **9**, after **3 minutes** it is **4**, and after **4 minutes** it is **-1**. Following the same pattern, what will his score be after **5 minutes**?



x y



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x y

