

Algebra problem-solving and end-of-year review

MODULE 10 · 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 Cian plays a counting-back game on the class number line. He jumps back the same amount each time and lands on **30**, **21**, **12**, **3**. What comes next in the sequence?
- 2 Cara is at a sleepover with her friends. They write down the number of biscuits left in the tin each time they look: **37**, **30**, **23**, **16**. What comes next in the sequence?
- 3 Cian keeps a weekly tally of the net change in books on the class library shelves. Over four weeks the figures are **10**, **0**, **-10** and **-20**. What comes next in the sequence?
- 4 Tadhg is counting fruit in the lunchboxes on a typical Tuesday. **10** lunchboxes hold **52** pieces of fruit, **4** lunchboxes hold **22** pieces and **3** lunchboxes hold **17** pieces. What is the rule that maps the number of lunchboxes to the number of pieces of fruit?
- 5 Cian is tracking the bird-feeder at the classroom window. He records that **7** birds take **20** seeds, **1** bird takes **8** seeds and **5** birds take **16** seeds. What rule maps the number of birds to the number of seeds taken?

