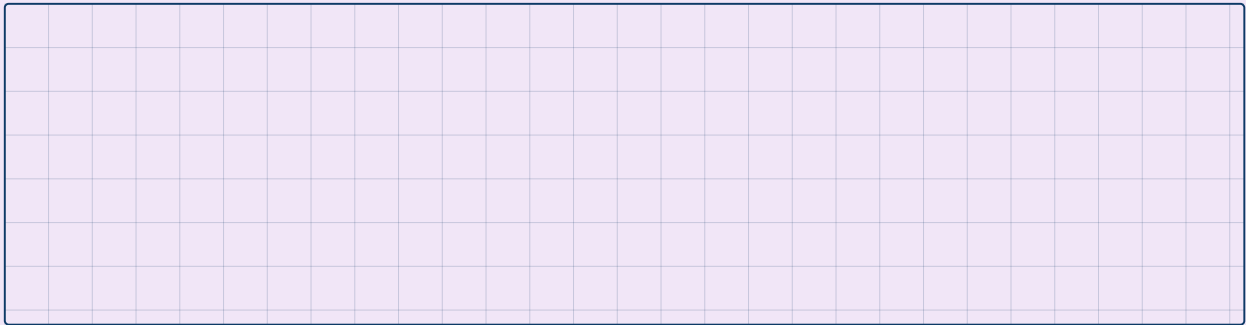


NEXT STAGE ON THE STAIRCASE

- 1 The counts so far are 1, 3, 5.
- 2 Each stage adds 2 more squares than the one before.
- 3 Add the step: $5 + 2 = 7$.
- 4 So the next stage must have 7 squares.

WARM-UP

Use the squared grid to draw and continue the growing patterns.



1. Draw the three stages that use 2, 4 and 6 squares
2. Add the next stage that must use 8 squares
3. Beside it draw the stages 1, 3, 5 and the next stage with 7 squares

PRACTICE

- 1 Sam builds block towers that use 11 blocks, then 13, then 15. How many blocks will the next tower need?
- 2 Lia makes flat patterns with 3 pieces, then 6, then 9. What number of pieces comes next?
- 3 A building pattern grows by 2 pieces each time and stage 3 already has 6 pieces. How many pieces will stage 4 have?

? ALWAYS, SOMETIMES, NEVER

Always, sometimes or never true? Write A, S or N.

- | | |
|--|--|
| a. In a growing pattern the same step is added at every stage <input type="text"/> | c. Knowing the step lets you predict the next stage without drawing <input type="text"/> |
| b. The next number in a growing pattern is even. <input type="text"/> | d. A growing pattern can have a step of zero <input type="text"/> |

REFLECT

How did counting the extra pieces each time help you predict the next shape?



x y



ALGEBRA



x y

