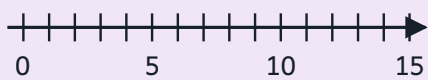


PREDICT THE NEXT STAGE

- 1 Look at the stages 1, 4, 7
- 2 Jump from 1 to 4 is **3**
- 3 Jump from 4 to 7 is **3**
- 4 Rule is add **3** each time
- 5 Next stage is $7 + 3$ which is **10**

 WARM-UP

Mark the growing-pattern points on the blank number line and show the equal jumps.



1. Mark 2, 4, 6 and 8 and draw the jumps of 2
2. Mark 3, 6, 9, 12 and 15 and draw the jumps of 3
3. Mark 2, 6, 10 and 14 and draw the jumps of 4

 PRACTICE

- 1 You build a growing L with matchsticks: stage 1 has 22, stage 2 has 24, stage 3 has 26. How many matchsticks at the next stage?
- 2 Chairs around pushed-together tables start 25, then 27, then 29. How many chairs come at the next stage?
- 3 You stack building blocks in a grow-by pattern: 5, then 10, then 15. What fixed amount is added each time?
- 4 A grow-by-3 building pattern of bricks shows stage 1: 11, stage 2: 14, stage 3: 17, stage 4: 20. What is stage 5?
- 5 Dots in a growing building shape go 3, then 8, then 13. Predict the number of dots at the next stage.
- 6 Chairs around 1, 2 and 3 square tables give 4, 8 and 12 seats. What is the rule for this pattern?

? ALWAYS, SOMETIMES, NEVER

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

- a. In a growing pattern each stage is the same amount bigger than the one before it.
- b. The next number after 3, 6, 9 must be 15.
- c. If the rule is add 2 then the stages stay even numbers.
- d. Once you know the rule you can predict a stage you have not built yet.