GCSE MATHS · SEQUENCES

# Blurt it

Step 1

**Name** _____ **Date** _____

1. Cover your notes and put your phone face down.
2. Set a timer for 5 minutes.
3. Write down everything you remember about sequences: methods, key words, examples, and mistakes to avoid. Diagrams count too.

**Stuck? Start with one of these:** term-to-term rule · common difference · nth term

**When the timer ends, turn over and check what you remembered.**



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# Check it, fix it, space it

Steps 2, 3 and 4

## Check it

Tick each idea you wrote down, even in your own words.

- [ ] Continue a sequence and describe its term-to-term rule
- [ ] Term-to-term rule finds the next term; the nth term finds any term from its position
- [ ] Know square numbers, triangular numbers and Fibonacci-type sequences (add the last two)
- [ ] A linear sequence goes up or down by the same amount each time: the common difference
- [ ] nth term of a linear sequence: the common difference × n, then adjust the number added
- [ ] Use an nth term: substitute n = 1, 2, 3 and so on to find the terms
- [ ] Is a number in the sequence? Set the nth term equal to it: a whole-number n means yes
- [ ] The first term is n = 1: avoid being one position out when you check
- [ ] A quadratic sequence has a constant second difference: recognise it and continue it
- [ ] A geometric sequence multiplies by the same common ratio each time
- [ ] Find the common ratio by dividing a term by the term before it

### Higher only

- [ ] nth term of a quadratic sequence: halve the second difference to get the number before $n^2$
- [ ] Use the second differences, not the first differences, to find the $n^2$ part
- [ ] nth term of a geometric sequence: first term × common ratio to the power (n − 1)
- [ ] Find a sequence's rule from a real-life or growing-pattern context
- [ ] Use simultaneous equations to find unknowns that define a sequence

Key words to use: sequence · term · term-to-term rule · position-to-term rule (nth term)
arithmetic sequence · geometric sequence · common difference · common ratio · quadratic sequence

**I remembered _____ out of 11.** **Higher only: _____ out of 5.**

## Fix it

Pick 3 ideas you missed. Look them up, then write each one correctly.

1

2

3

## Space it

Blurt again on a fresh sheet. Gaps help you remember for longer.

**Tomorrow**
Date _____
Score _____ / 11
Higher only _____ / 5

**In 3 days**
Date _____
Score _____ / 11
Higher only _____ / 5

**In a week**
Date _____
Score _____ / 11
Higher only _____ / 5


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