

Check out

You should now be able to ...

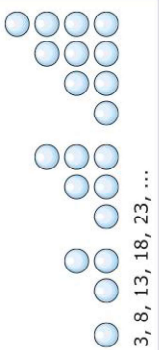
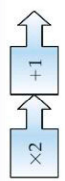
	Questions
✓ Identify and use term-to-term rules.	6 1
✓ Generate sequences using term-to-term rules.	6 2
✓ Find and use position-to-term rules.	6 3 – 5
✓ Find and use the n th term.	6 6, 7

Test it

Questions

Language Meaning

Example

nth term	A formula for the position-to-term rule of a sequence. The n th term for the sequence 3, 8, 13, 18, 23, ... is $5n - 2$
Rule	How you get from one term to the next in a sequence. The rule for the sequence 3, 8, 13, 18, 23, ... is 'add 5'.
Sequence	A pattern of numbers or diagrams. 3, 8, 13, 18, 23, ... 
Term	A number in the sequence, identified by its position. For the sequence 3, 8, 13, 18, 23, ... the first term is 3, the second term is 8, etc.
Flow Chart	A flow chart is a diagram that describes a sequence of operations.  Means 'multiply by two' then 'add six'

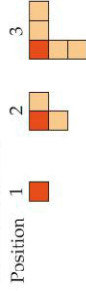
1 For each sequence, find the term-to-term rule and write the next two terms of the sequence.

- a 9 16 23 30
- b 35 32 29 26
- c 1 3 9 27

2 Write the first five terms of the sequences with these rules.

- a Start with 6 and add 2
- b Start with 90 and subtract 8
- c Start with 5 and double
- d Start with 3, double and subtract 1

3 This sequence of diagrams is formed by adding squares.



a Draw the diagram for position 4.

b How many squares are added to the previous pattern to make the next pattern?

c State the rule that connects the pattern number and the number of tiles needed.

d Find how many squares are in the 15th term of the sequence.

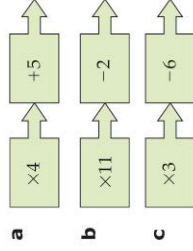
4 Find the position-to-term-rule for each of these sequences.

- a 7 9 11 13 15
- b 4 9 14 19 24

5 Find the 12th term of the sequences with these position-to-term rules.

- a multiply the position by 4 then subtract 9
- b $2n + 11$
- c $8n - 20$
- d $4n - 4$

6 Write the n th term for these rules.



7 Find the n th term rule for each of these sequences.

- a 14 24 34 44 54
- b 5 13 21 29 37
- c 7 8 9 10 11
- d 150 250 350 450 550

What next?

Score	
0 – 3	Your knowledge of this topic is still developing. To improve look at Formative test: 3A-13; MyMaths: 1173 and 1165
4 – 6	You are gaining a secure knowledge of this topic. To improve look at Invisipen: 281, 282 and 283
7	You have mastered this topic. Well done, you are ready to progress!