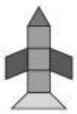
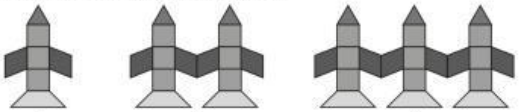
Exercise 2.1

Focus

1 Here is a rocket made of seven shapes.



Magda draws a sequence using the rockets.



1 2 3

She records information about the sequence in a table.

Position	1	2	3	
Term (number of shapes)				28

a Complete the table.

b What is the term-to-term rule for the sequence?

c What is the position-to-term rule for the sequence?

d What is the 25th term in the sequence?

2 Felipe counts up in steps of 0.3 starting at 4.
Write the first five terms of Felipe's sequence.

3 Write the next two terms in each sequence.

a 1.4, 1.5, 1.6, 1.7, ☐, ☐

b $\frac{1}{2}$, 1, $1\frac{1}{2}$, 2, $2\frac{1}{2}$, ☐, ☐

c 0, −0.3, −0.6, −0.9, −1.2, ☐, ☐

4 a Find the position-to-term rule for the numbers in this table.

Position	Term
1	9
2	18
3	27
4	36

b What is the 10th term of the sequence 9, 18, 27 ...?

5 $1 = 100 cents

a Complete the table.

$ (position)	1	2	5	10	100
cents (term)					

b What is the position-to-term rule for the sequence 100, 200, 300 ...?

LIVEWORKSHEETS

Practice

6 Given the first term and the term-to-term rule, write down the first six terms of each sequence. Then find the position-to-term rule and the 50th term.

a First term: 9, term-to-term rule: add 9

First six terms: _____

Position-to-term rule: _____

50th term: ☐

b First term: 11, term-to-term rule: add 11

First six terms: _____

Position-to-term rule: _____

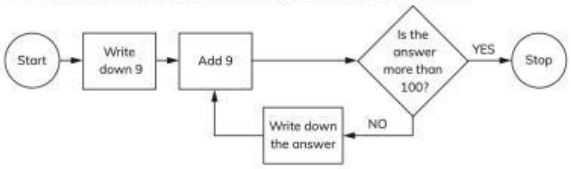
50th term: ☐

7 Safia counts back in steps of 0.5 starting at 2.9.

a What is the 5th number in her sequence? ☐

b What is the 10th number in her sequence? ☐

8 a Follow the instructions in the flow diagram to generate a sequence.



_____

b What is the position-to-term rule for the sequence?

_____

c Imagine the sequence continues forever.

What is the 60th term in the sequence?

☐

9 Kiki counts in steps of 0.03 starting at 3.26.
What are the next three numbers in her count?

3.26, 3.29, 3.32, ☐, ☐, ☐, ...

10 Write a sequence of five terms with steps of constant size which has a first term of 1 and a second term of $1\frac{2}{5}$.

_____

Challenge

11 a Write the first five numbers in a sequence that starts at 42 and has a term-to-term rule of add 0.15

_____

b What is the 10th term in the sequence? ☐

12 A sequence has a position-to-term rule of multiply by 6. Complete the table.

Position	Term
1	
2	
	30
	36
	72

13 The numbers in this sequence increase by equal amounts each time.

a Write the three missing numbers.

10, ☐, ☐, ☐, 42

b What is the term-to-term rule for the sequence? _____

c Salma says, 'The position-to-term rule is multiply by 8. Is she correct? Explain your answer.

_____

_____

LIVEWORKSHEETS