

N2.2 Extending number patterns

**Key
idea**

When you find the rule you can continue the sequence.

A1

Find the next 4 numbers in each sequence.

a 28, 23, 18, , , ,

b 32, 43, 54, , , ,

c 80, 66, 52, , , ,

d -14, -6, 2, , , ,

e 3, 3.5, 4, , , ,

A2

Copy each sequence and fill in the missing numbers.

a 25, 38, , , , 90, ,

b 43, , 27, 19, , , ,

c , , , , , -27, -39, -51

d 0.3, 0.8, , 1.8, 2.3, , ,

A3

Write 5 numbers in a number sequence where the rule is

a add 7

b subtract 29

c subtract 0.1

d add 0.25

B1 Write the rule for each sequence.

a 1, 4, 9, 16, 25, ...

b 1, 3, 6, 10, 15, ...

c 1, 3, 7, 13, 21, ...

d 14, 24, 44, 74, 114, ...

B2 Find the next 4 numbers in each sequence in B1.

B3 Copy each sequence and fill in the missing numbers.

a 3, 5, 9, 15, 23, , , , ...

b 6, 11, 21, 36, 56, , , , ...

c -18, -16, -12, -6, 2, , , , ...

d 4.5, 5, 6, 7.5, , , , , ...

B4 Write 5 numbers in a sequence where the rule is

a subtract consecutive odd numbers

b add 1.1

C1 **a** Copy and complete this table.

Sequence	5	9	14	21	31	45
1st differences						
2nd differences						

b Use your table from **a** to find the next 2 numbers in the sequence.

C2 Use the method in C1 to find the next 2 numbers in this sequence.

1 3 6 12 23 41

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