

Geometric and Numerical Patterns

Example 1 Find the pattern. Then write the next two numbers.

a. 2, 5, 8, 11, ...

b. 2, 6, 18, 54, ...

a. Use a table to organize the terms and find the next two numbers.

Position	1	2	3	4	5	6
Term	2	5	8	11	14	17

Each term is 3 more than the previous term.

Add 3 to a term to find the next term.

► The next two numbers are 14 and 17.

b. Use a table to organize the terms and find the next two numbers.

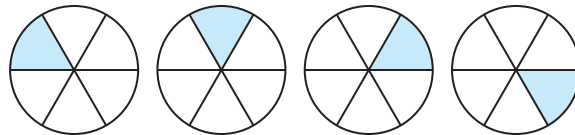
Position	1	2	3	4	5	6
Term	2	6	18	54	162	486

Each term is 3 times the previous term.

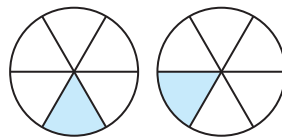
Multiply a term by 3 to find the next term.

► The next two numbers are 162 and 486.

Example 2 Find the pattern. Then draw the next two figures in the sequence.



The shaded region moves one region clockwise in each figure. The next two figures in the sequence are shown below.



Practice

Check your answers at BigIdeasMath.com.

Find the pattern. Then write the next two numbers.

1. 7, 14, 28, 56, ...

Multiply by 2; 112, 224

2. 4, 9, 14, 19, ...

Add 5; 24, 29

3. 4, -2, -8, -14, ...

Add -6; -20, -26

4. **PATTERN** Find the pattern. Then draw the next two figures in the sequence.

The side lengths increase by one unit in each figure.

