Section 2 Key Concepts

Sequences (pp. 15–17)

A sequence is an ordered list of numbers or objects.

Example

5, 10, **15**, 20, 25, ...

The **3rd term** in the sequence is **15**.

Each number or object of a sequence is a term. The position of each term can be labeled with a term number.

A table can help you see how the term numbers and terms of a sequence are related and write a rule for finding the terms of the sequence.

Example

Term number	1	2	3	4	5
Term	5	10	15	20	25

Rule: Start with 5. Add 5 to each term to get the next term.

or

The term is 5 times the term number.

Equations and Variables (pp. 18–20)

You can use variables to write an equation that shows how a term in a sequence is related to its term number. A variable is a letter, word, or symbol used to represent unknown quantities or quantities that change. To evaluate an expression with one or more variables, substitute a number for each variable. Then carry out any operations in the expression.

Example Write an equation for the rule for the sequence 5, 10, 15, 20, ...

The term t is 5 times the term number n.

$t = 5 \cdot n$ **or** $t = 5n$

Key Terms

sequence

term
term number

rule

equation
variable

evaluate an expression

18 **Key Concepts Question** Make a table for the sequence 3, 5, 7, 9, 11, ... Extend the table to include the next two terms. Then write a rule for the sequence.