Exponents and **Exponential Functions**



- **8.1** Apply Exponent Properties Involving Products
- **8.2** Apply Exponent Properties Involving Quotients
- 8.3 Define and Use Zero and Negative Exponents
- **8.4** Use Scientific Notation
- 8.5 Write and Graph Exponential Growth Functions
- 8.6 Write and Graph Exponential Decay Functions

Before

In previous chapters and courses, you learned the following skills, which you'll use in Chapter 8: evaluating expressions involving exponents, ordering numbers, writing percents as decimals, and writing function rules.

Prerequisite Skills

VOCABULARY CHECK

- 1. Identify the exponent and the base in the expression 13⁸.
- 2. Copy and complete: An expression that represents repeated multiplication of the same factor is called a(n) ?.

SKILLS CHECK

Evaluate the expression. (Review p. 2 for 8.1-8.3.)

3.
$$x^2$$
 when $x = 10$ **4.** a^3 when $a = 3$ **5.** r^2 when $r = \frac{5}{6}$ **6.** z^3 when $z = \frac{1}{2}$

5.
$$r^2$$
 when $r = \frac{5}{6}$

6.
$$z^3$$
 when $z = \frac{1}{2}$

Order the numbers from least to greatest. (Review p. 909 for 8.4.)

Write the percent as a decimal. (Review p. 916 for 8.5 and 8.6.)

13. Write a rule for the function. (Review p. 35 for 8.5 and 8.6.)

Input	0	1	4	6	10
Output	2	3	6	8	12

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