# Algebra • Powers of 10 and Exponents

You can represent repeated factors with a base and an exponent.

**Write 10 × 10 × 10 × 10 × 10 × 10 in exponent form.**

10 is the repeated factor, so 10 is the **base**.

The base is repeated 6 times, so 6 is the **exponent**.

$10^6$ ——— exponent

$10 \times 10 \times 10 \times 10 \times 10 \times 10 = 10^6$

| base

A base with an exponent can be written in words.

**Write $10^6$ in words.**

The exponent 6 means "the sixth power."

$10^6$ in words is "the sixth power of ten."

You can read $10^2$ in two ways: "ten squared" or "the second power of ten."

You can also read $10^3$ in two ways: "ten cubed" or "the third power of ten."

**Write in exponent form and in word form.**

**1.** $10 \times 10 \times 10 \times 10 \times 10 \times 10 \times 10$

    exponent form: _____    word form: _____

**2.** $10 \times 10 \times 10$

    exponent form: _____    word form: _____

**3.** $10 \times 10 \times 10 \times 10 \times 10$

    exponent form: _____    word form: _____

**Find the value.**

**4.** $10^4$           **5.** $2 \times 10^3$           **6.** $6 \times 10^2$

_____    _____    _____

# Powers and Words

**Find the value. Then write the value in word form.**

**1.** $70 \times 10^3 = $ _____

Word form: _____

**2.** $35 \times 10^2 = $ _____

Word form: _____

**3.** $14 \times 10^3 = $ _____

Word form: _____

**4.** $60 \times 10^7 = $ _____

Word form: _____

**5.** $51 \times 10^4 = $ _____

Word form: _____

**6.** $24 \times 10^5 = $ _____

Word form: _____

**7.** $86 \times 10^6 = $ _____

Word form: _____

**8.** $19 \times 10^7 = $ _____

Word form: _____

**9. Stretch Your Thinking** What is another way to write the
number in Exercise 1 using a whole number and a power of 10?