

LESSON

9-1

Exponents**Reteach**

You can write a number in exponential form to show repeated multiplication. A number written in exponential form has a **base** and an **exponent**. The exponent tells you how many times a number, the base, is used as a factor.

8^4 ← exponent



base

Write the expression in exponential form.

$$(0.7) \times (0.7) \times (0.7) \times (0.7)$$

0.7 is used as a factor 4 times.

$$(0.7) \times (0.7) \times (0.7) \times (0.7) = (0.7)^4$$

Write each expression in exponential form.

1. $\frac{1}{20} \times \frac{1}{20} \times \frac{1}{20} \times \frac{1}{20}$

2. 8×8

3. $7.5 \times 7.5 \times 7.5$

4. (0.4)

You can find the value of expressions in exponential form.

Find the value.

$$5^6$$

Step 1 Write the expression as repeated multiplication.

$$5 \times 5 \times 5 \times 5 \times 5 \times 5$$

Step 2 Multiply.

$$5 \times 5 \times 5 \times 5 \times 5 \times 5 = 15,625$$

$$5^6 = 15,625$$

Simplify.

5. $\left(\frac{1}{2}\right)^3$

6. $(1.2)^5$

7. 3^6

8. $\left(\frac{4}{3}\right)^2$
