



**SECTION**

**1A**

**Ready to Go On? Skills Intervention**

**1-2 Exponents**

Numbers may be written as a **power**. The **exponent** tells how many times the **base** is multiplied by itself.

**Vocabulary**

power  
exponent  
base

**Evaluating Powers**

Find each value.

**A.**  $7^3$

$7^3 =$  \_\_\_\_\_

$=$  \_\_\_\_\_

How many times is 7 multiplied by itself? \_\_\_\_\_

What is the base? \_\_\_\_\_ What is the exponent? \_\_\_\_\_

Find the product.

**B.**  $2^5$

$2^5 =$  \_\_\_\_\_

$=$  \_\_\_\_\_

How many times is 2 multiplied by itself? \_\_\_\_\_

What is the base? \_\_\_\_\_ What is the exponent? \_\_\_\_\_

Find the product.

**Expressing Whole Numbers as Powers**

Write the number using an exponent and the given base.

64, base 4

$64 =$  \_\_\_\_\_

$= 4^{\text{—}}$

How many times must 4 be multiplied by itself to equal 64? \_\_\_\_\_

What is the exponent? \_\_\_\_\_

**Earth Science Application**

A radar altimeter measures the distance from a space satellite to the surface of the earth by measuring the time delay between the emission of a short microwave pulse and the echo it produces when it bounces off the earth. The microwave range between 100 MHz and 10,000 MHz is used for this measurement. Find the microwave range as a power of ten.

What is the microwave range? \_\_\_\_\_

Write each value as a product of 10.

$100 =$  \_\_\_\_\_

$= 10^{\text{—}}$  MHz

$10,000 =$  \_\_\_\_\_

$= 10^{\text{—}}$  MHz

The microwave range used by the radar altimeter is between \_\_\_\_\_ and \_\_\_\_\_ MHz.