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## Using Exponents to Describe Numbers

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A **power** is an expression made up of a base and an exponent.

$$4^5$$

The base is the number you multiply by itself in a power.

The exponent is the number of times you multiply the base in a power.

A shorter way of writing repeated multiplication, using a base and an exponent is called exponential form (as a power).

$$4 \times 4 \times 4 \times 4 \times 4 = 4^5$$

### Example 1

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a) Write  $2 \times 2 \times 2 \times 2$  in exponential form.

b) Evaluate the power.

### Example 2

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Evaluate each power:

a)  $4^2$

b)  $3^6$

**Example 3**

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Evaluate each power:

a)  $2^4$

b)  $(-2)^4$

c)  $-2^4$

**Example 4**

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Evaluate each power:

a)  $(-4)^3$

b)  $-(-5)^6$

**Your Turn!!!**

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Evaluate each power:

a)  $(-5)^2$

b)  $-5^2$

c)  $-(-5)^2$



Complete the following:

**Practice - Using Exponents to Describe Numbers**

Check your solutions using the key provided.