

## TOPIC: EVALUATING EXPONENTS

### Intro to Exponents

- ◆ When a number is multiplied by itself \_\_\_\_\_, it can be written using exponents.
- The **base** is the number being \_\_\_\_\_ & the **exponent/power** is how many \_\_\_\_\_ the base is multiplied.

**New** **Exponent Notation**

$8 \cdot 8 \cdot 8 \cdot 8 =$  \_\_\_\_\_ to the \_\_\_\_\_ power  
\_\_\_\_\_ multiplied \_\_\_\_\_ times

$b \cdot b \cdot b \cdot \dots \cdot b =$  \_\_\_\_\_ to the \_\_\_\_\_ power  
(General Exponent Notation)  
\_\_\_\_\_ multiplied \_\_\_\_\_ times

### **EXAMPLE**

Find the value of each exponential expression by rewriting as a product.

(A)  $7^2$       "7 \_\_\_\_\_"

(B)  $10^3$       "10 \_\_\_\_\_"

(C)  $2^5$

- ◆ A number with *NO* exponent implies an exponent of \_\_\_,  $b = b^{—}$ .

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### **PRACTICE**

Rewrite each product as an exponential expression.

(A)  $3 \times 3 \times 3 \times 3 \times 3 \times 3 \times 3$

(B)  $\left(\frac{2}{9}\right) \times \left(\frac{2}{9}\right) \times \left(\frac{2}{9}\right) \times \left(\frac{2}{9}\right) \times \left(\frac{2}{9}\right)$

### **PRACTICE**

Evaluate the following.

(A)  $13^1$

(B)  $7^3$

(C)  $2^8$

### **EXAMPLE**

Evaluate the following.

(A)  $\left(\frac{1}{3}\right)^4$

(B)  $\left(\frac{7}{4}\right)^3$

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### **EXAMPLE**

Write as an expression containing exponents.

$$(1.3)(1.3)(1.3)$$