

Introduction to Exponents: What Is an Exponent?

ANSWERS

An exponent is the simplest way to show how many times a number is multiplied by itself.

This example shows how to simplify an expression using exponents.

Example: $4 \times 4 \times 4 \times 4 \times 4$

The number 4 is multiplied by itself 5 times.

We can write

$$4^5$$

An **exponent** indicates how many times the base number is multiplied by itself.

The **base** is the number.

Write the following expressions using exponents.

$$5 \times 5 \times 5 \longrightarrow \boxed{5^3}$$

$$7 \times 7 \times 7 \times 7 \times 7 \times 7 \longrightarrow \boxed{7^6}$$

$$3 \times 3 \times 3 \times 3 \longrightarrow \boxed{3^4}$$

$$4 \times 4 \times 4 \times 4 \longrightarrow \boxed{4^4}$$

$$9 \times 9 \longrightarrow \boxed{9^2}$$

$$6 \times 6 \times 6 \times 6 \times 6 \longrightarrow \boxed{6^5}$$

$$10 \times 10 \times 10 \times 10 \longrightarrow \boxed{10^4}$$

$$1 \times 1 \times 1 \longrightarrow \boxed{1^3}$$