Exponentiation is a mathematical operation, written as b^n, involving two numbers, the **base** b and the **exponent** (or **power**) n. When n is a positive integer, exponentiation corresponds to repeated multiplication; in other words, a product of ***n*** factors, each of which is equal to ***b*** (the product itself can also be called**power**):

$$b^n = \underbrace{b \times \cdots \times b}_{n}$$

just as multiplication by a positive integer corresponds to repeated addition:

$$n \times b = \underbrace{b + \cdots + b}_{n}$$

Negative exponents

The following identity holds for an arbitrary integer n and nonzero b:

$$b^{-n} = 1/b^n$$