

## Numbers in Exponential Notation

Remember:

In the expression  $b^n$ ,  $b$  is the number called *base*,  $n$  is a natural number called *exponent*, and  $b^n$  is called the  $n$ th power of  $b$ .

The exponent  $n$  means  $b$  is used  $n$  times as a factor to obtain the value of  $b^n$

The product of two or more powers having the same base is equal to the base raised to the sum of their exponents.

The quotient of two powers having the same base is equal to the base raised to the difference of their exponents.

Any nonzero number raised to the zeroth power is equal to 1.

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Answer in standard form:

$$(7 \times 10^2) + (5 \times 10^1) + (3 \times 10^0) =$$

$$(8 \times 10^7) + (9 \times 10^4) =$$

Give the value in standard form:

$$10^2 \times 5^2 =$$

$$5^3 - 8^2 =$$

$$2^3 + 2^3 =$$

Express the quotients in exponential and standard forms:

$$10^5 \div 10^3 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

$$(11 \times 11^5) \div 11^2 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

$$\underline{2^7} = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

$$2^7$$

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