Associative Property of Addition

Changing the grouping of addends does not change their sum. It is also called the *Grouping Property of Addition.*

*Example:* For all numbers $a$, $b$, and $c$,

$$a + (b + c) = (a + b) + c.$$
base

A number used as a repeated factor in a product.

*Example:* In $8^3$, 8 is the *base.*
Commutative Property of Addition

Changing the order of addends does not change their sum. It is also called the Order Property of Addition.

Example: For all numbers \(a\) and \(b\), \(a + b = b + a\).
A number with one or more digits to the right of a decimal point.

*Examples:* 17.03, 0.8, and 225.807 are *decimals.*
decimal point

A symbol used to separate the ones and tenths places in a decimal.

Example: 4.2365

decimal point
difference

The result of subtraction.

Example: \( 486 - 38 = 448 \)
equation

A mathematical sentence that shows that two expressions are the same value.
evaluate

To substitute the values given for the variables in an expression and perform the operations to find the value of the expression.
expanded form

A way of writing a number as the sum of the values of its digits.

*Example:* 4,852 in *expanded form* is

\[(4 \times 1,000) + (8 \times 100) + (5 \times 10) + (2 \times 1)\]
**exponent**

The number in a power that tells the number of times the base is used as a factor.

*Example:* In $5^3$, 3 is the exponent.
expression

A number, variable, or any combination of numbers, variables, and operation signs.

*Examples:* 19, $x$, $a-10$, $5n^3$ are expressions.
Identity Property of Addition

The property which states that the sum of any number and 0 is that number.

Example: \( x + 0 = 0 + x = x \)
In a number, each group of three digits separated by a comma.

*Example:* In 345,507,147 the thousands *period* is 507.
place value

The value of a digit determined by its place in a number.

*Example:* The *place value* of 5 in the number 305,784 is 5 thousands or $5 \times 1,000$. 
power of 10

A power with a base of 10.

Examples: $10^1$, $10^2$, $10^3$, ... are powers of 10.
sequence

An ordered set of numbers.

*Example:* 1, 1, 2, 3, 5, 8, 13, ... is a *sequence.*
standard form

A way of writing a number using only digits.

*Example:* 254 is the *standard form* of $200 + 50 + 4$. 
The result in addition.

*Example:* $3 + 7 = 10$

sum
variable

A letter that represents a number in an algebraic expression.

Example: \(6 + (r \div 2)\)