= 4 + 3 " or " 2 × 5 =
5 × 2 " , the property can also be used in more advanced settings . The name is needed because there are operations , such as division and subtraction , that do not have it (for example , " 3 ? 5 ? 5 ? 3 ") , such operations are not commutative , or noncommutative operations . The idea that simple operations , such as multiplication and addition of numbers , are commutative was for many years implicitly assumed and the property was not named until the 19th century when mathematics started to become formalized .

= = Common uses = =

The commutative property (or commutative law) is a property generally associated with binary operations and functions . If the commutative property holds for a pair of elements under a certain binary operation then the two elements are said to commute under that operation .

= = Mathematical definitions = =

The term " commutative " is used in several related senses .

= = Examples = =

= = = Commutative operations in everyday life = = =

Putting on socks resembles a commutative operation since which sock is put on first is unimportant . Either way , the result (having both socks on) , is the same . In contrast , putting on underwear and trousers is not commutative .
The commutativity of addition is observed when paying for an item with cash . Regardless of the order the bills are handed over in , they always give the same total .

= = = Commutative operations in mathematics = = =

Two well @-@ known examples of commutative binary operations :
The addition of real numbers is commutative , since
<formula>