

Associative property essay sample

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Associative, distributive and cumulative are the three basic mathematical properties that we can apply in basic arithmetic operations. Everything we do with mathematics involves the application of all or any of these three properties.

Associative property comes from the root word “associate” which basically refers to the grouping of numbers, terms or operations we apply. When we are asked to apply the associative property of numbers, this means they want us to regroup things. This property is always applicable to addition and multiplication; however, in subtraction and division there are some exceptions. The application of this property is most common when we refer to algebraic equations to make things a tidier.

In addition, the associative property says that:

$$x + (y + z) = (x + y) + z$$

No matter what the grouping we have, these generate the same result. This is the same through with multiplication where

$$x * (y * z) = (x * y) * z$$

In subtraction and division however, these cannot just be implemented as there is a possibility of yielding a different result except in a few isolated cases. Let's take the following examples:

$$x - (y - z) \neq (x - y) - z$$

$1 - (2 - 3) \neq (1 - 2) - 3$; by the hierarchy, we compute first elements inside braces

$$1 - (-1) \neq (-1) - 3$$

$$0 \neq -4$$

This also holds true with division. Take for example the following:

$$x \div (y \div z) \neq (x \div y) \div z$$

$$1 \div (2 \div 3) \neq (1 \div 2) \div 3$$

$$1 \div .667 \neq 0.5 \div 3$$

$$1.499 \neq 0.1667$$

References:

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