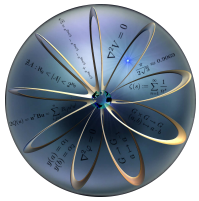

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difference

Canonical name	Difference
Date of creation	2013-03-22 17:33:35
Last modified on	2013-03-22 17:33:35
Owner	pahio (2872)
Last modified by	pahio (2872)
Numerical id	16
Author	pahio (2872)
Entry type	Definition
Classification	msc 20K99
Classification	msc 00A05
Classification	msc 11B25
Related topic	VectorDifference
Related topic	SetDifference
Related topic	Multiple
Related topic	GeneralAssociativity
Related topic	Quotient
Related topic	DifferenceOfVectors
Defines	minuend
Defines	subtrahend

The *difference of* two numbers a and b is a number d such that

$$b+d \;=\; a.$$

The difference of a (the *minuend*) and b (the *subtrahend*) is denoted by $a-b$.

The definition is for the elements a, b of any Abelian group (e.g. of a vector space). The difference of them is always unique.

Note 1. Forming the difference of numbers (resp. elements), i.e. subtraction, is in a certain sense converse to the addition operation:

$$(x+y)-y \;=\; x$$

Note 2. As for real numbers, one may say that the difference *between* a and b is $|a-b|$ (which is the same as $|b-a|$); then it is always nonnegative. For all complex numbers, such a phrase would be nonsense.

Some

- $b+(a-b) \;=\; a$
- $a-b \;=\; a+(-b)$
- $-(a-b) \;=\; b-a$
- $n(a-b) \;=\; na-nb \quad (n \in \mathbb{Z})$
- $a-a \;=\; 0$