



## Why

Is the inverse of an element function the element function of a different element?

## Definition

The *inverse* of an element of an algebra (also called the *inverse element*) is the element (if it exists) whose corresponding element function under the operation is the inverse of the first element's function.

## Notation

Let  $(A, +)$  be an algebra. Let  $a \in A$ . If the inverse element for  $a$  exists and is unique we denote it by  $a^{-1}$ . In other words  $+^{a^{-1}} \circ +^a = \text{id}_A$



