Why

We often have two algebras for which we can identify elements of the ground set.

Definition

Let $(A, +_A)$ and $(B, +_B)$ be two algebras.[1]

An *isomorphism* between these two algebras is a bijection $f : A \to B$ satisfying:

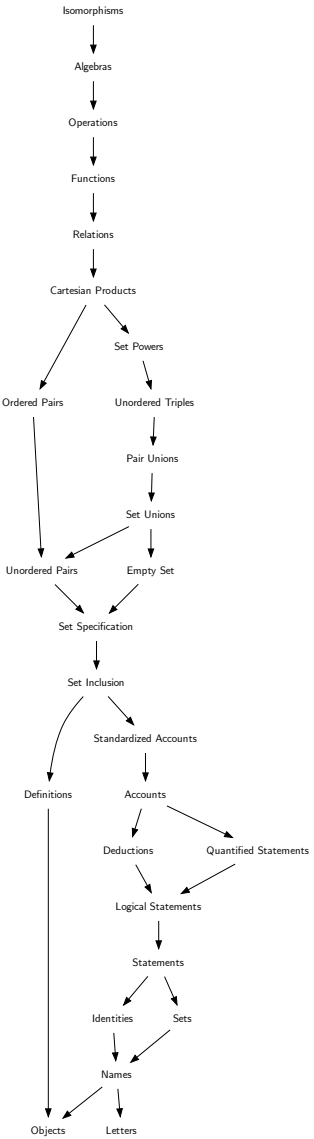
$$f(a +_A a') = f(a) +_B f(a')$$

and

$$f^{-1}(b +_B b') = f^{-1}(b) +_A f^{-1}(b').$$

If there exists an isomorphism between two algebras we say that the algebras are *isomorphic*.

[1] Future editions will change this notation to avoid clashes with right and left identity elements (see *Identity Elements*).


Isomorphisms
Algebras
Operations
Functions
Relations
Cartesian Products
Set Powers
Ordered Pairs
Unordered Triples
Pair Unions
Set Unions
Unordered Pairs
Empty Set
Set Specification
Set Inclusion
Standardized Accounts
Definitions
Accounts
Deductions
Quantified Statements
Logical Statements
Statements
Identities
Sets
Names
Objects
Letters