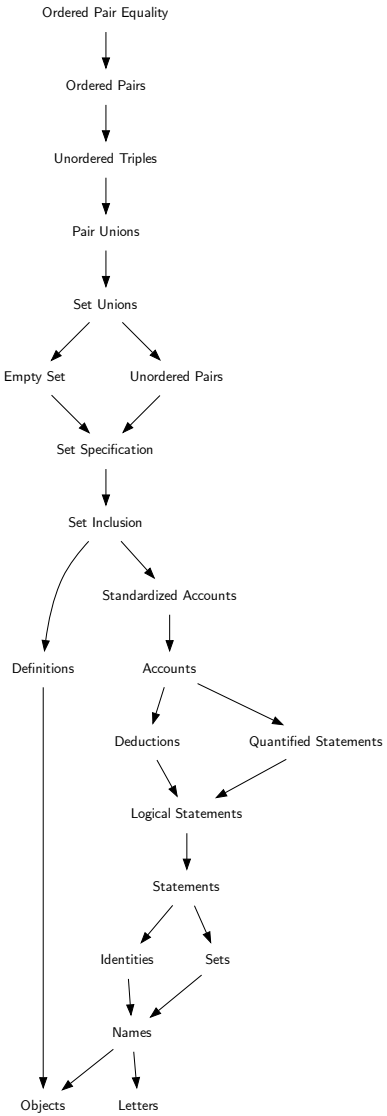
Why

To agree with our inuition, an if two ordered pairs are the same, they shoulld have the same objects in the same place. And conversely, if they have the same objects in the same place, they should be the same.

Result

We can prove that our definition of an ordered pair (as a set, see *Ordered Pairs*) agrees with this intuition. In other words,

Proposition 1. $(a, b) = (c, d)$ *if and only if* $a = b$ *and* $c = d$.


Ordered Pair Equality
Ordered Pairs
Unordered Triples
Pair Unions
Set Unions
Empty Set
Unordered Pairs
Set Specification
Set Inclusion
Standardized Accounts
Definitions
Accounts
Deductions
Quantified Statements
Logical Statements
Statements
Identities
Sets
Names
Objects
Letters