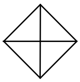


Why

$\{a\} \cup \{b\} = \{a, b\}$

Definition

Let a, b and c denote objects. From the associativity of the pair union Notice By the associativty pair unions (see *Pair Unions*) we have that

$$(\{a\} \cup \{b\}) \cup \{(\}b) = \{a\} \cup (\{b\} \cup \{c\}).$$

So we will drop the parantheses, and write $\{a\} \cup \{b\} \cup \{b\}$. We call such a set the *unordered triple* of a, b and c.

ßNotation

Such sets are so commonlplace that we denote the unordered triple of a, b and c by $\{a, b, c\}$.

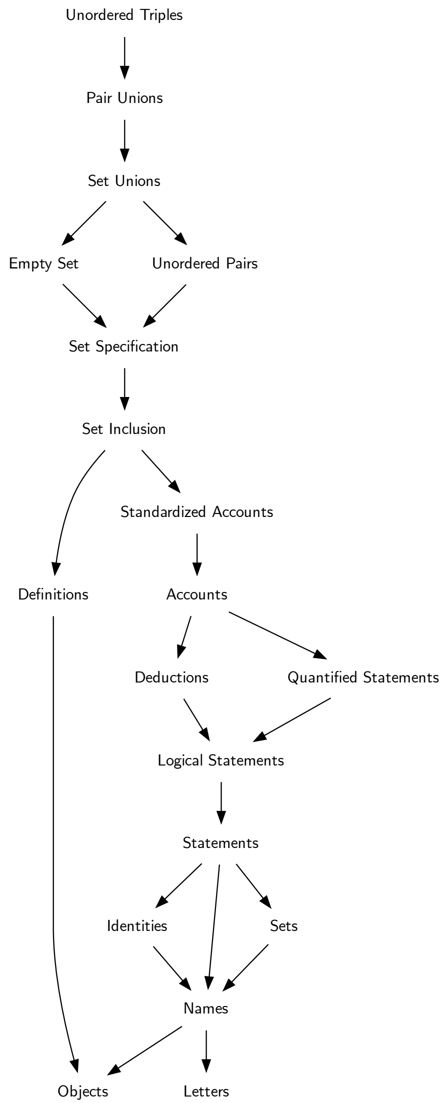
Extensions

Let d denote an object. It is also the case that we can drop the parantheses from

$$(((\{a\} \cup \{b\}) \cup \{c\})\{d\})).$$

We can therefore write $\{a\} \cup \{b\} \cup \{c\} \cup \{d\}$ without ambiguity. We call this set the *unordered quadruple* denote this set by $\{a, b, c, d\}$.

In a similar way we speak of *unordered pentuples*, *unordered sextuples*, *unordered septuples* and so on. If we have several objects named, we denote the set containing these objects be writing their names in between braces $\{$ and $\}$.


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