Why

Definition

We want to talk about the size of a set. A *finite* set is one that is equivalent to some natural number; an infinite set is one which is not finite.

Proposition **1.** *A set can be equivalent to at most one natural number.*

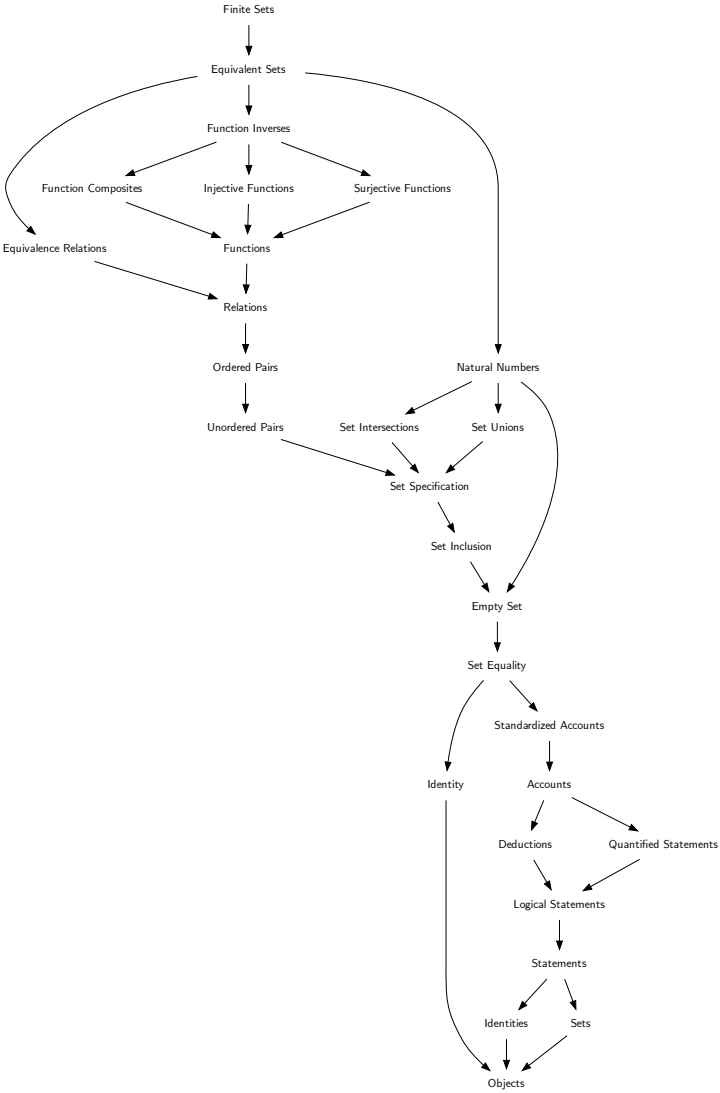
The *number* of a finite set is the unique natural number equivalent to it. We also call this the *size* of the set.

Notation

We denote the number of a set by $|A|$.

Properties

Proposition **2.** $A \subset B \implies |a| \leq |B|$


Finite Sets
Equivalent Sets
Function Inverses
Function Composites
Injective Functions
Surjective Functions
Equivalence Relations
Functions
Relations
Ordered Pairs
Natural Numbers
Unordered Pairs
Set Intersections
Set Unions
Set Specification
Set Inclusion
Empty Set
Set Equality
Standardized Accounts
Identity
Accounts
Deductions
Quantified Statements
Logical Statements
Statements
Identities
Sets
Objects