Why

[1]

Definition

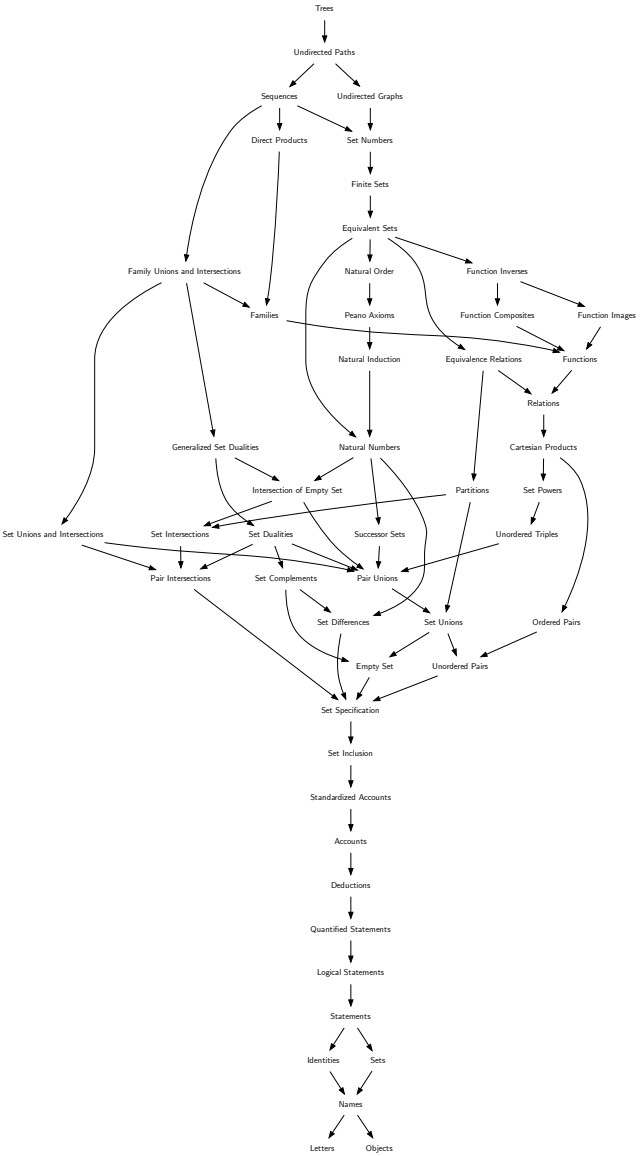
An undirected graph is a *tree* if it is connected and acyclic. An undirected graph is a *forest* if it is acyclic. Each connected component of a forest is a tree, motivating the definition.

Properties

Proposition 1. *There is a unique path between any two vertices of a tree.*

Proof. Such a path exists because the tree is connected. Such a path is unique because the existence of two separate paths would create a cycle. □

[1] Future editions will include.


Trees
Undirected Paths
Sequences
Undirected Graphs
Direct Products
Set Numbers
Finite Sets
Equivalent Sets
Family Unions and Intersections
Natural Order
Function Inverses
Families
Peano Axioms
Function Composites
Function Images
Natural Induction
Equivalence Relations
Functions
Relations
Generalized Set Dualities
Natural Numbers
Cartesian Products
Intersection of Empty Set
Partitions
Set Powers
Set Unions and Intersections
Set Intersections
Set Dualities
Successor Sets
Unordered Triples
Pair Intersections
Set Complements
Pair Unions
Set Differences
Set Unions
Ordered Pairs
Empty Set
Unordered Pairs
Set Specification
Set Inclusion
Standardized Accounts
Accounts
Deductions
Quantified Statements
Logical Statements
Statements
Identities
Sets
Names
Letters
Objects