Why

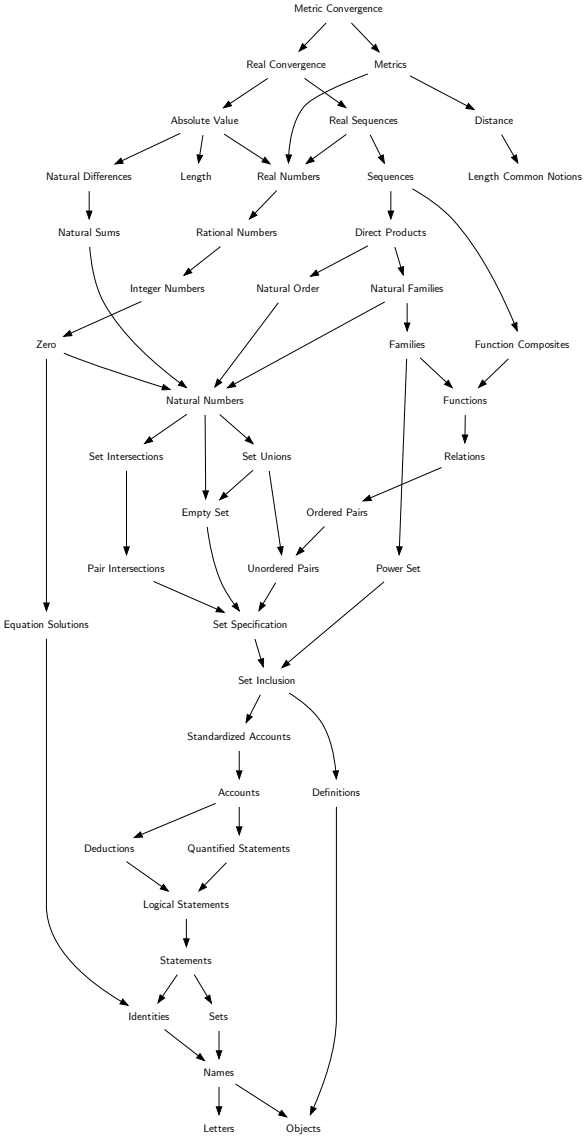
Once we have a notion of distance, we can define a more general notion of convergence.

Definition

A sequence of elements of a metric space *converges* to an fixed element of the space if the sequence of distances between the elements of the fixed element converges to zero.

Notation

Let (A, d) be a metric space. Let $(a_n)_n$ be a sequence in A Then $\{a\}$ converges to a_0 if $d(a_n, a) \to 0$.


Metric Convergence
Real Convergence
Metrics
Absolute Value
Real Sequences
Distance
Natural Differences
Length
Real Numbers
Sequences
Length Common Notions
Natural Sums
Rational Numbers
Direct Products
Integer Numbers
Natural Order
Natural Families
Zero
Families
Function Composites
Natural Numbers
Functions
Set Intersections
Set Unions
Relations
Empty Set
Ordered Pairs
Pair Intersections
Unordered Pairs
Power Set
Equation Solutions
Set Specification
Set Inclusion
Standardized Accounts
Accounts
Definitions
Deductions
Quantified Statements
Logical Statements
Statements
Identities
Sets
Names
Letters
Objects