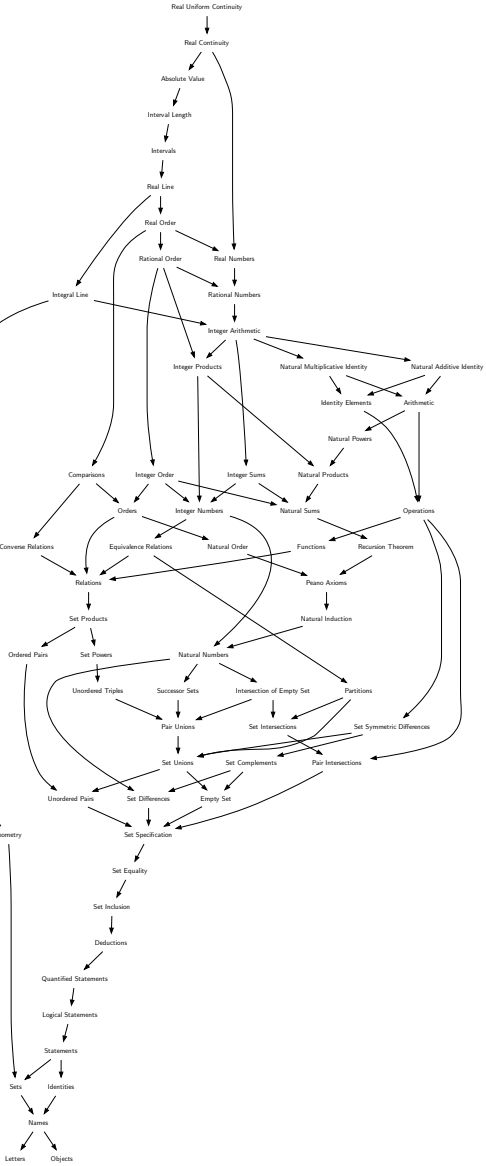
Definition

Let $f : \mathbf{R} \to \mathbf{R}$. Then f is *uniformly continuous* at $x \in \mathbf{R}$ if

$$(\forall \varepsilon > 0)(\exists \delta > 0)(\forall x \in \mathbf{R})(|x - y| < \delta \Rightarrow |f(x) - f(y)| < \varepsilon)$$

for all $y \in \mathbf{R}$.


Real Uniform Continuity
Real Continuity
Absolute Value
Interval Length
Intervals
Real Line
Real Order
Rational Order
Real Numbers
Integral Line
Rational Numbers
Integer Arithmetic
Integer Products
Natural Multiplicative Identity
Natural Additive Identity
Identity Elements
Arithmetic
Natural Powers
Comparisons
Integer Order
Integer Sums
Natural Products
Orders
Integer Numbers
Natural Sums
Operations
Converse Relations
Equivalence Relations
Natural Order
Functions
Recursion Theorem
Relations
Peano Axioms
Set Products
Natural Induction
Ordered Pairs
Set Powers
Natural Numbers
Unordered Triples
Successor Sets
Intersection of Empty Set
Partitions
Pair Unions
Set Intersections
Set Symmetric Differences
Set Unions
Set Complements
Pair Intersections
Unordered Pairs
Set Differences
Empty Set
Geometry
Set Specification
Set Equality
Set Inclusion
Deductions
Quantified Statements
Logical Statements
Statements
Sets
Identities
Names
Letters
Objects