Why

We want our spaces to be analytically complete.[1]

Definition

Our model for completeness is the real numbers, which are (by definition) complete. A metric space is *complete* if every egoprox sequence converges.

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[1]Future editions will modify.

Complete Metric Spaces

Eqapprox Sequences

Metrics

Distance   Real Eqapprox Sequences

Space Distance   Real Limits

Plane Distance   Absolute Value

Interval Length

Real Space   Intervals

Real Plane   Real Line

Real Order   Integral Line   Real Sequences

Geometry   Rational Order   Real Numbers

Rational Numbers   Sequences

Lists   Integer Arithmetic

Set Numbers   Integer Products   Natural Multiplicative Identity   Natural Additive Identity

Finite Sets   Arithmetic   Identity Elements

Equivalent Sets   Direct Products   Natural Powers

Comparisons   Function Inverses   Family Unions and Intersections   Integer Order   Integer Sums   Natural Products

Orders   Function Composites   Function Images   Families   Integer Numbers   Natural Sums   Operations

Converse Relations   Natural Order   Functions   Equivalence Relations   Recursion Theorem

Relations   Peano Axioms

Set Products   Natural Induction

Set Powers   Generalized Set Dualities   Natural Numbers

Unordered Triples   Set Dualities   Intersection of Empty Set   Successor Sets   Partitions   Set Unions and Intersections   Set Symmetric Differences

Ordered Pairs   Pair Unions   Set Intersections   Set Complements

Set Unions   Pair Intersections   Set Differences

Unordered Pairs   Empty Set

Set Specification

Set Inclusion

Standardized Accounts

Accounts

Deductions

Quantified Statements

Logical Statements

Statements

Sets   Identities

Names

Letters   Objects