Definition

A *complete normed space* (or *Banach space*, or *complete norm space*) is a normed space whose induced metric space is complete.[1]

---

[1]The term Banach space is universal, but in accordance with the Bourbaki project's guidelines on naming, we will tend to use the term complete normed space, even though such terminology is more verbose.

Complete Normed Space

Complete Metric Space Norm Metrics

Norms

Functionals

Eggbox Sequences Vectors Real Norm

Real Eggbox Sequences Metrics Real Vectors Space Norm

Real Limits Plane Vector Sums and Differences Space Vectors Plane Norm N-Dimensional Space

Absolute Value Plane Vectors Distance

Space Distance

Interval Length Plane Distance

Intervals Real Space

Real Line Real Plane

Real Sequences Real Order Integral Line Geometry

Fields Real Numbers Rational Order

Rings Rational Numbers Sequences

Integer Arithmetic Lists

Natural Additive Identity Natural Multiplicative Identity Integer Products Set Numbers

Identity Elements Arithmetic Finite Sets

Natural Powers Equivalent Sets

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

Operations Natural Sums Integer Numbers Families Function Images Function Composites Orders

Recursion Theorem Equivalence Relations Functions Natural Order Converse Relations

Peano Axioms Relations

Natural Induction Set Products

Generalized Set Dualities Natural Numbers Set Powers

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

Set Complements Pair Unions Set Intersections Ordered Pairs

Set Difference Pair Intersections Set Unions

Empty Set Unordered Pairs

Set Specification

Set Equality

Set Inclusion

Deductions

Quantified Statements

Logical Statements

Statements

Identities Sets

Names

Letters Objects

4