Definition

Suppose $\mathcal{G} = (G, \circ)$ is a group. A *topological group* is a tuple $(\mathcal{G}, \mathcal{T})$ where $(G, \mathcal{T})$ is a topological space and the group operations are continuous.

Topological Groups

Topologies

Metrics

Distance

Absolute Value

Space Distance

Plane Distance

Interval Length

Real Space

Intervals

Real Line

Real Plane

Integral Line

Real Order

Groups

Geometry

Real Numbers

Rational Order

Rings

Rational Numbers

Lists

Integer Arithmetic

Set Numbers

Direct Products

Natural Multiplicative Identity

Natural Additive Identity

Integer Products

Finite Sets

Identity Elements

Arithmetic

Equivalent Sets

Natural Powers

Integer Sums

Integer Order

Function Inverses

Comparisons

Family Unions and Intersections

Operations

Natural Products

Integer Numbers

Orders

Function Composites

Function Images

Families

Natural Sums

Equivalence Relations

Natural Order

Functions

Converse Relations

Recursion Theorem

Relations

Peano Axioms

Ordered Pair Projections

Natural Induction

Set Products

Natural Numbers

Set Powers

Generalized Set Dualities

Set Symmetric Differences

Partitions

Intersection of Empty Set

Successor Sets

Unordered Triples

Set Dualities

Set Unions and Intersections

Set Complements

Set Intersections

Pair Unions

Ordered Pairs

Set Differences

Set Unions

Pair Intersections

Empty Set

Unordered Pairs

Set Specification

Set Equality

Set Inclusion

Deductions

Quantified Statements

Logical Statements

Statements

Sets

Identities

Names

Letters

Objects