Definition

We denote the *volume measure* (or *space measure*, *Lebesgue measure*) on $\mathbf{R}^3$ by λ.[1]

Notation

We denote the volume of a measurable set $A \subset \mathbf{R}^d$ by $\mathrm{vol}(A)$.

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[1]Future editions will clean up and complete the development.

Volume Measure

Area Measure

Length Measure

Measure

Sigma Algebra

Extended Real Numbers

Real Series

Real Limits

Absolute Value

Interval Length

Intervals

Real Space

Real Line

Real Plane

Real Sequences

Integral Line

Real Order

Geometry

Real Numbers

Rational Order

Subset Algebra

Sequences

Rational Numbers

Cardinality

Lists

Integer Arithmetic

Natural Fractions

Set Number

Direct Products

Natural Multiplicative Identity

Natural Additive Identity

Integer Products

Finite Sets

Identity Elements

Natural Arithmetic

Equivalent Sets

Comparisons

Operations

Natural Powers

Family Unions and Intersections

Integer Sums

Integer Order

Function Inverses

Orders

Natural Products

Integer Numbers

Families

Function Images

Function Composites

Converse Relations

Natural Sums

Equivalence Relations

Functions

Natural Order

Recursion Theorem

Relations

Peano Axioms

Ordered Pair Projections

Natural Induction

Set Products

Subset Systems

Generalized Set Dualities

Natural Numbers

Set Powers

Ordered Pairs

Set Symmetric Differences

Set Dualities

Set Unions and Intersections

Successor Sets

Intersection of Empty Set

Unordered Triples

Set Partitions

Set Complements

Pair Unions

Set Intersections

Set Differences

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