Why

We discuss negligible setsin the language of probability measures.

Definition

Let $(\Omega, \mathcal{A}, \mathbf{P})$ be a probability space. An event $A \in \mathcal{A}$ happens *almost surely* (or *almost certainly*, *almost always*) if $\mathbf{P}(A) = 1$. (An equivalent condition is that $\mathbf{P}(\Omega - A) = 0$.) Conversely, an event $B \subset \Omega$ happens *almost never* if $\mathbf{P}(B) = 0$.

Almost Sure Events

Probability Measures

Negligible Sets

Measures

Sigma Algebras

Extended Real Numbers

Real Series

Event Probabilities

Real Limits

Probability Distributions

Absolute Value

Outcome Probabilities

Interval Length

Real Summation

Intervals

Real Line

Real Sequences

Real Order

Subset Algebra

Natural Summation

Sequences

Real Numbers

Rational Order

Lists

Rational Numbers

Integral Line

Cardinality

Direct Products

Integer Arithmetic

Set Numbers

Integer Products

Natural Additive Identity

Natural Multiplicative Identity

Finite Sets

Uncertain Events

Family Operations

Identity Elements

Arithmetic

Equivalent Sets

Family Unions and Intersections

Operations

Natural Powers

Integer Sums

Integer Order

Function Inverse

Comparisons

Families

Natural Products

Integer Numbers

Function Images

Function Composites

Orders

Natural Sums

Equivalence Relations

Functions

Natural Order

Converse Relations

Recursion Theorem

Peano Axioms

Relations

Uncertain Outcomes

Ordered Pair Projections

Natural Induction

Set Products

Subset Systems

Generalized Set Dualities

Natural Numbers

Set Powers

Ordered Pairs

Set Unions and Intersections

Set Dualities

Intersection of Empty Set

Successor Sets

Unordered Triples

Set Symmetric Differences

Partitions

Pair Unions

Set Complements

Set Intersections

Pair Intersections

Set Differences

Set Unions

Unordered Pairs

Empty Set

Set Specification

Geometry

Set Equality

Set Inclusion

Deductions

Quantified Statements

Logical Statements

Statements

Identities

Sets

Names

Letters

Objects