Why

We want to guess random variables. Sometimes we have other random variables which we can use to make our guess.

Definition

Let $(\Omega, \mathcal{A}, \mathbf{P})$ be a probability space. Let V a set. Let $x : \Omega \to V$. An *estimate* or *prediction* or *guess* for x is a value $v \in V$. Now let U be a set and let $y : \Omega \to U$. An *estimator* or *predictor* for x given y is a function from U to V.

Estimators

Probability Measures

Measures   Event Probabilities

Extended Real Numbers   Probability Distributions

Real Limits   Intervals

Real Line

Real Sequences   Real Order   Real Summation

Geometry   Real Numbers

Rational Numbers

Integer Arithmetic   Natural Summation

Sequences   Family Operations   Natural Additive Identity   Natural Multiplicative Identity   Subset Algebras   Probability Events

Families   Algebras   Identity Elements   Arithmetic   Cardinality   Probability   Set Operations

Operations   Integer Products   Natural Exponents   Common Sense

Functions   Integer Sums   Natural Products

Integer Numbers   Natural Sums

Equivalence Relations   Recursion Theorem

Relations   Peano Axioms

Cartesian Products   Natural Induction   Subset Systems

Ordered Pairs   Natural Numbers   Set Powers

Successor Sets   Unordered Triples   Intersection of Empty Set   Partitions

Pair Unions   Set Symmetric Differences   Set Intersections

Set Unions   Set Complements   Pair Intersections

Unordered Pairs   Set Differences   Empty Set

Set Specification

Set Inclusion

Standardized Accounts

Accounts

Deductions

Quantified Statements

Logical Statements

Statements

Sets   Identities

Names

Letters   Objects

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