Why

Definition

A *random vector* is a random variables whose values are vectors.

Notation

Let $x : \Omega \to \mathbf{R}^n$ be a random vector.

$$x(\omega) = \begin{bmatrix} x_1(\omega) \\ x_2(\omega) \\ \ldots \\ x_3(\omega) \end{bmatrix}.$$

Random Vectors

Random Variables

Matrices

Probability Measures — Measurable Functions

Measure

Topological Sigma Algebras

Event Probabilities

Extended Real Numbers

Vectors

Topological Spaces

Probability Events

Probability Distributions

Real Limits

Metrics

Subset Algebras

Probability Outcomes

Real Summation

Real Sequences

Intervals

N-Dimensional Space

Fields

Distance

Set Operations

Cardinality

Probability

Real Numbers

Space

Groups

Length Common Notions

Common Sense

Rational Numbers

Integer Additive Inverses

Natural Summation

Inverse Elements

Integer Arithmetic

Sequences

Family Operations

Element Functions

Natural Additive Identity

Natural Multiplicative Identity

Integer Sums

Families

Algebras

Identity Elements

Arithmetic

Function Inverses

Integer Products

Operations

Function Composites

Natural Exponents

Function Images

Integer Numbers

Functions

Natural Products

Equivalence Relations

Relations

Natural Sums

Subset Systems

Cartesian Products

Recursion Theorem

Set Powers

Ordered Pairs

Peano Axioms

Natural Induction

Unordered Triples

Natural Numbers

Partitions

Intersection of Empty Set

Successor Sets

Set Symmetric Differences

Set Intersections

Pair Unions

Pair Intersections

Set Complements

Set Unions

Empty Set

Set Differences

Unordered Pairs

Set Specification

Set Inclusion

Standardized Accounts

Definitions

Accounts

Deductions

Quantified Statements

Logical Statements

Statements

Identities

Sets

Names

Objects

Letters