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.

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

Random Vectors

Random Variables

Matrices

Measurable Functions · Probability Measures

Measures

Event Probabilities · Topological Sigma Algebra · Extended Real Numbers

Real Limits · Probability Distributions · Topological Spaces · Vectors

Probability Events · Real Sequences · Real Summation · Intervals · Metrics · N-Dimensional Space

Sequences · Subset Algebras · Probability Outcomes · Natural Summation · Real Numbers · Fields · Distance · Space

Direct Products · Cardinality · Family Operations · Set Operations · Probability · Rational Numbers · Groups · Length Common Notions

Natural Families · Injective Functions · Natural Order · Algebras · Common Sense · Integer Numbers

Subset Systems · Function Composites · Families · Operations · Natural Sums · Zero

Power Set · Functions · Natural Numbers · Set Symmetric Differences

Relations · Set Unions · Set Intersections

Ordered Pairs · Empty Set · Pair Intersections

Unordered Pairs · Set Complements · Equation Solutions

Set Specification

Set Inclusion

Standardized Accounts

Definitions · Accounts

Quantified Statements · Deductions

Logical Statements

Statements

Sets · Identities

Names

Objects · Letters