Why

TODO

Definition

The *standard deviation* of an integrable real-valued random variable is the square root of its variance.

Notation

Let f be an integrable real-valued random variable. Denote the standard deviation of f by $\mathsf{std}(f)$. We have defined it

$$\mathsf{std}(f) = \sqrt{\mathsf{var}(f)}.$$

Standard Deviation

Covariance

Variance

Expectation

Random Variables

Probability Measures — Measurable Functions

Event Probabilities — Measures

Probability Events — Probability Distributions — Extended Real Numbers — Topological Sigma Algebra

Probability Outcomes — Real Summation — Subset Algebras — Real Limits — Intervals — Topological Spaces

Probability — Natural Summation — Cardinality — Real Sequences — Set Operations — Metrics — Real Square Roots

Common Sense — Family Operations — Sequences — Real Numbers — Distance — Natural Square Roots

Algebras — Direct Products — Function Composites — Rational Numbers — Length Common Notions — Square Numbers

Operations — Natural Sums — Families — Functions — Integer Numbers — Natural Products — Squares

Relations — Natural Numbers

Successor Sets — Set Intersections

Subset Systems — Cartesian Products — Pair Intersections

Set Powers — Ordered Pairs

Unordered Triples

Pair Unions — Set Symmetric Differences — Equation Solutions

Set Unions — Set Complements

Unordered Pairs — Empty Set — Set Differences

Set Specification

Set Inclusion

Standardized Accounts

Definitions — Accounts

Quantified Statements — Deductions

Logical Statements

Statements

Sets — Identities

Names

Objects — Letters