Why

1

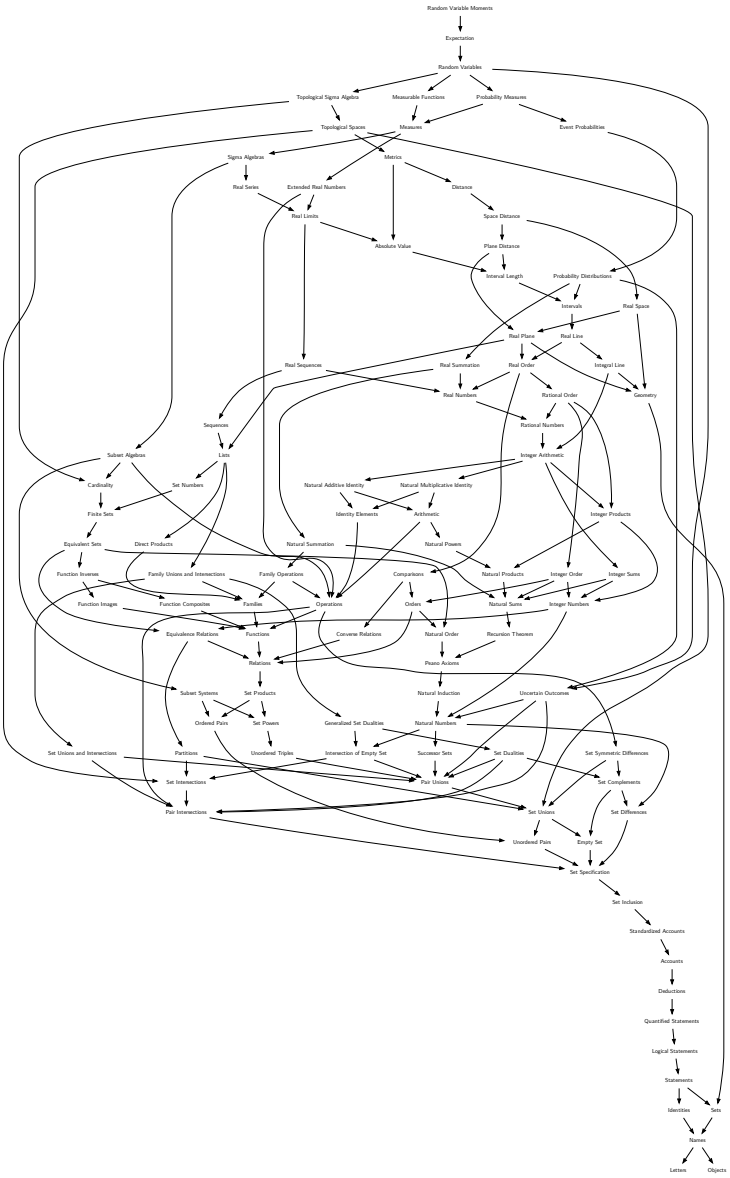
Results

If the integral of the nth power of a real-valued random variable exists, the *nth moment* of the random variable is the expectation of its nth power.

Notation

Let $(X, \mathcal{A}, \mathbf{P})$ be a probability space. Let x be a real-valued random variable on X such that $\int x^n d\mathbf{P}$ exists. The nth moment of f is $\mathbf{E}(f^n)$.

[1] Future editions will include.


Random Variable Moments
Expectation
Random Variables
Topological Sigma Algebra
Measurable Functions
Probability Measure
Topological Spaces
Measures
Event Probabilities
Sigma Algebras
Metrics
Real Series
Extended Real Numbers
Distance
Real Limits
Space Distance
Absolute Value
Plane Distance
Interval Length
Probability Distributions
Intervals
Real Space
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Real Line
Real Sequences
Real Summation
Real Order
Integral Line
Real Numbers
Rational Order
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Integer Arithmetic
Cardinality
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Natural Additive Identity
Natural Multiplicative Identity
Finite Sets
Identity Elements
Arithmetic
Integer Products
Equivalent Sets
Direct Products
Natural Summation
Natural Powers
Function Inverse
Family Unions and Intersections
Family Operations
Comparisons
Natural Products
Integer Order
Integer Sums
Function Image
Function Composition
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Equivalence Relations
Functions
Converse Relations
Natural Order
Recursion Theorem
Relations
Peano Axioms
Subset Systems
Set Products
Natural Induction
Uncertain Outcomes
Ordered Pairs
Set Powers
Generalized Set Dualities
Natural Numbers
Set Unions and Intersections
Partitions
Unordered Triples
Intersection of Empty Set
Successor Sets
Set Dualities
Set Symmetric Differences
Set Intersections
Pair Unions
Set Complements
Pair Intersections
Set Unions
Set Differences
Unordered Pairs
Empty Set
Set Specification
Set Inclusion
Standardized Accounts
Accounts
Deductions
Quantified Statements
Logical Statements
Statements
Identities
Sets
Names
Letters
Objects