Why

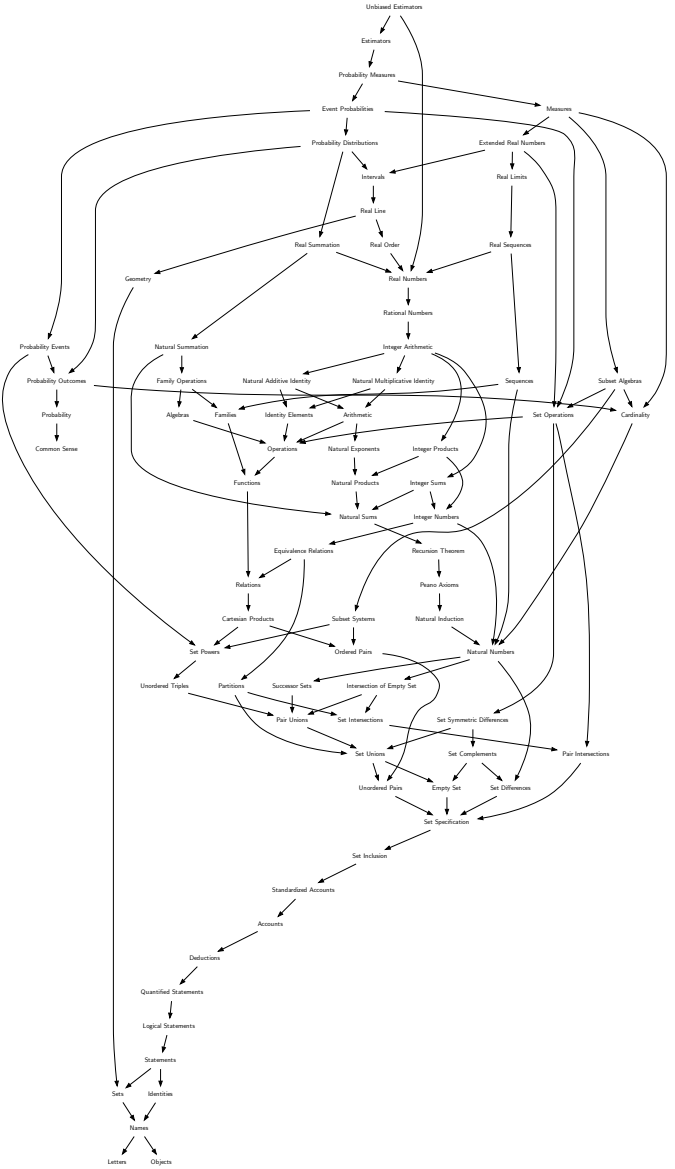
[1]

Definition

Consider a random variable $x : \Omega \to \mathbf{R}^n$. The error of the estimate $\xi \in \mathbf{R}^n$ is the random variable $e : \Omega \to \mathbf{R}^n$ which is defined by $e(\omega) = x(\omega) - \xi$. The *bias* of an estimate is the expected value of the error. An estimate is *unbiased* if it has zero bias.

Likewise, if we have another random variable $y : \Omega \to \mathbf{R}^m$, then the error of the estimator $f : \mathbf{R}^m \to \mathbf{R}^n$ is the random variable $e : \Omega \to \mathbf{R}^n$ defined by $e(\omega) = f(x(\omega)) - y(\omega)$.

[1] Future editions will include an account.


Unbiased Estimators
Estimators
Probability Measures
Measures
Event Probabilities
Probability Distributions
Extended Real Numbers
Intervals
Real Limits
Real Line
Real Summation
Real Order
Real Sequences
Geometry
Real Numbers
Rational Numbers
Probability Events
Natural Summation
Integer Arithmetic
Probability Outcomes
Family Operations
Natural Additive Identity
Natural Multiplicative Identity
Sequences
Subset Algebras
Probability
Algebras
Families
Identity Elements
Arithmetic
Set Operations
Cardinality
Common Sense
Operations
Natural Exponents
Integer Products
Functions
Natural Products
Integer Sums
Natural Sums
Integer Numbers
Equivalence Relations
Recursion Theorem
Relations
Peano Axioms
Cartesian Products
Subset Systems
Natural Induction
Set Powers
Ordered Pairs
Natural Numbers
Unordered Triples
Partitions
Successor Sets
Intersection of Empty Set
Pair Unions
Set Intersections
Set Symmetric Differences
Set Unions
Set Complements
Pair Intersections
Unordered Pairs
Empty Set
Set Differences
Set Specification
Set Inclusion
Standardized Accounts
Accounts
Deductions
Quantified Statements
Logical Statements
Statements
Sets
Identities
Names
Letters
Objects