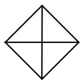

Expectation

Why

TODO

Definition

The *expectation* of a real-valued random variable defined on a probability space is its integral with respect to the probability measure.

Notation

Let $(X, \mathcal{A}, \mu)$ be a probability space and f be a random variable. We denote the expectation of f by $\mathbf{E}\, f$. We defined it by

$$\mathbf{E}\, f = \int f d\mu.$$


Expectation
Random Variables
Probability Measures
Measurable Functions
Measures
Event Probabilities
Extended Real Numbers
Topological Sigma Algebra
Probability Distributions
Real Limits
Topological Spaces
Probability Events
Real Summation
Intervals
Real Sequences
Metrics
Probability Outcomes
Natural Summation
Real Numbers
Sequences
Subset Algebras
Distance
Probability
Rational Numbers
Family Operations
Direct Products
Cardinality
Set Operations
Length Common Notions
Common Sense
Integer Numbers
Algebras
Natural Families
Injective Functions
Natural Order
Zero
Families
Operations
Function Composites
Subset Systems
Natural Sums
Equation Solutions
Power Set
Functions
Natural Numbers
Set Symmetric Differences
Relations
Set Unions
Set Intersections
Equations
Ordered Pairs
Set Complements
Unordered Pairs
Empty Set
Set Specification
Set Inclusion
Set Equality
Sentences
Identity
Sets
Objects