Why

TODO

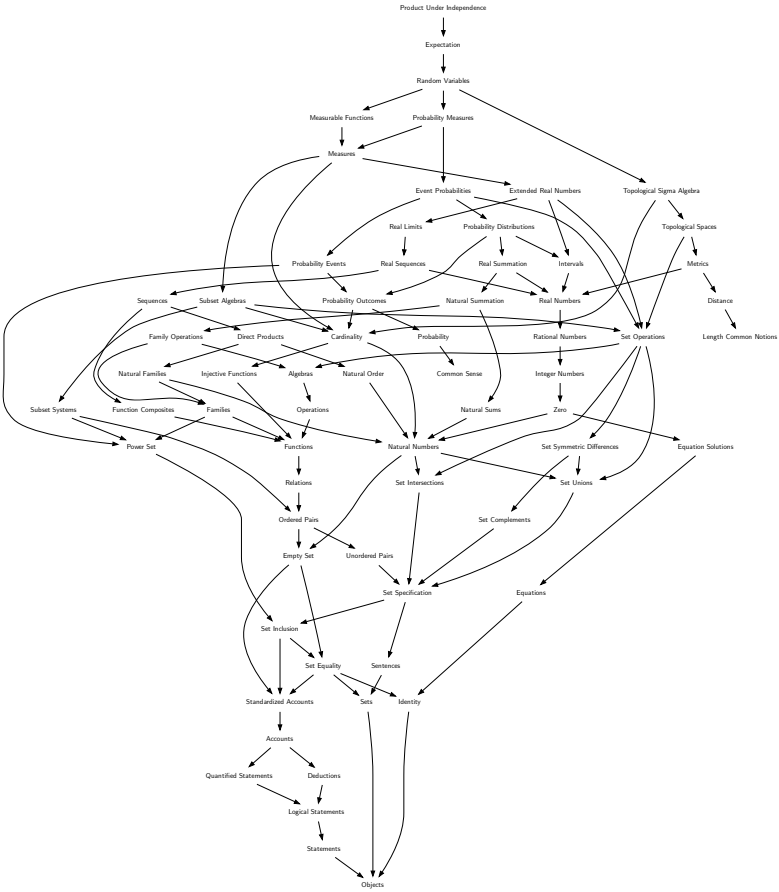
Result

Proposition **1.** *The expectation of the product of two independent random variables is the product of their expectations.*

Proof. Let f, g be two independent random variables. We want to show

$$\mathsf{E}\, fg = \mathsf{E}\, f\, \mathsf{E}\, g.$$

□


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