Why

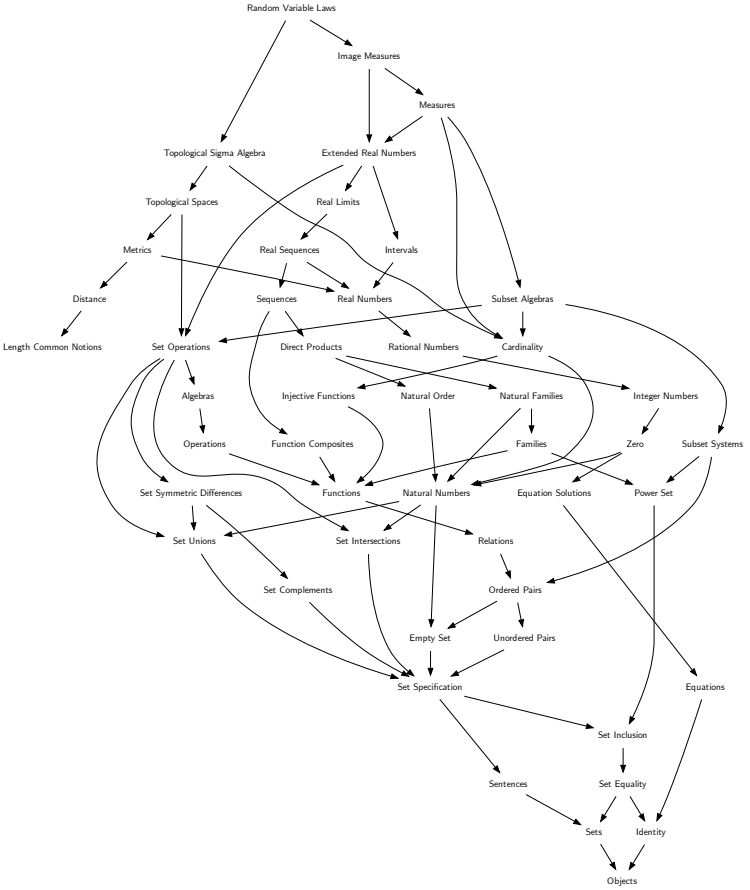
We name the image measures of real-valued random variables.

Definition

The *law* of a real-valued random variable, using the topological sigma algebra, is the image measure of the probability measure under the random variable Recall that

Notation

Let $(X, \mathcal{A})$ and $(Y, \mathcal{B})$ be two measurable spaces. Let $f : X \to Y$ be a random variable. Let $\mu : \mathcal{A} \to [0, \infty]$ be a probability measure. We denote the law of f by μ_f.


Random Variable Laws
Image Measures
Measures
Topological Sigma Algebra
Extended Real Numbers
Topological Spaces
Real Limits
Metrics
Real Sequences
Intervals
Distance
Sequences
Real Numbers
Subset Algebras
Length Common Notions
Set Operations
Direct Products
Rational Numbers
Cardinality
Algebras
Injective Functions
Natural Order
Natural Families
Integer Numbers
Operations
Function Composites
Families
Zero
Subset Systems
Set Symmetric Differences
Functions
Natural Numbers
Equation Solutions
Power Set
Set Unions
Set Intersections
Relations
Set Complements
Ordered Pairs
Empty Set
Unordered Pairs
Set Specification
Equations
Set Inclusion
Sentences
Set Equality
Sets
Identity
Objects