**Why**

**Definition**

The *generated moonotone class* for a set of subsets is the smallest monotone class containing the set of subsets. We must prove the existence and uniqueness of this monotone class

**Prop. 1.** *The intersection of a non-empty set of monotone classes on the same base set is a monotone class.*

*Proof.* TODO ☐

**Notation**

TODO

Generated Monotone Class

Monotone Classes

Sequences

Direct Products          Set Numbers

Finite Sets

Equivalent Sets

Function Inverses          Natural Order          Family Unions and Intersections          Set Operations

Function Images          Function Composites          Families          Operations

Functions          Equivalence Relations          Peano Axioms

Relations          Natural Induction

Subset Systems          Set Products          Natural Numbers          Generalized Set Dualities

Ordered Pairs          Set Powers          Partitions          Successor Sets          Intersection of Empty Set

Unordered Triples          Set Intersections          Set Unions and Intersections          Set Dualities          Set Symmetric Differences

Pair Unions          Pair Intersections          Set Complements

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