

Intro to Discrete Structures

Lecture 1

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1. The Foundations: Logic and Proof

- 1.1. Propositional Logic
- 1.2. Propositional Equivalences
- 1.3. Predicates and Quantifiers
- 1.4. Nested Quantifiers
- 1.5. Rules of Inference
- 1.6. Introduction to Proofs
- 1.7. Proof Methods and Strategy

1.1. Propositional Logic

The rules of logic

- give precise meaning to mathematical statements and
- are used to distinguish between valid and invalid mathematical arguments.

A major goal is to teach you how to understand and construct correct mathematical arguments.