Twenty-fourth lecture

Leftover:

Proof of the max-flow min-cut theorem

• A LITTLE ON LOGIC

A language $\mathcal{L}$

Function symbols, relation symbols

An $\mathcal{L}$-structure

$\mathfrak{A} = (A, (Z^{\mathfrak{A}})_{Z \in \mathcal{L}})$

Homomorphisms, embeddings, isomorphisms

$\mathcal{L}$-terms, $\mathcal{L}$-formulas, $\mathcal{L}$-sentences

Sentential logic

First-order predicate logic

Semantics

Truth values

Models of theories, axioms

(Semantic consequence)

(Formal proofs)

(Natural deduction)

(Gödel's completeness theorem)