König lemma

Compactness, denumerable case

Continuity of the operator Cn

Exercises

Clausal logic and resolution

Clausal logic

Resolution rule

Completeness results

Query-answering with resolution

Davis-Putnam lemma

Semantic resolution

Autark and lean sets

Exercises

Testing satisfiability

Table method

Hintikkasets

Tableaux

Davis-Putnam algorithm

Boolean constraint propagation

The DPLL algorithm

Improvements to DPLL?

Reduction of the search SAT to decision SAT

Exercises

Polynomial cases of SAT

Positive and negative formulas

Horn formulas

Autarkies for Horn theories

Dual Horn formulas

Krom formulas and 2-SAT

Renameable classes of formulas

Affine formulas

Exercises

SAT, integer programming, and matrix algebra

Representing clauses by inequalities

Resolution and other rules of proof

Pigeon-hole principle and the cutting plane rule

Satisfiability and \{-1, 1\}-in leger programming

Embedding SAT into matrix algebra

Exercises

Coding runs of Turing machines, NP-completeness