SymPy-ready algorithm for solving SAT problems using algebraic approach and ZDDs

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SymPy is a Python library for symbolic mathematics. The logic module for SymPy allows to form and manipulate logic expressions using symbolic and Boolean values. This module provides implementation of DPLL algorithm for solving SAT problems.

We suggest to use algebraic approach for solving SAT problems [6] with few modifications based on reductions of intermediate expressions as in the algorithms for construction Groebner basis. As internal representation of boolean expressions we propose to use ZDD diagrams [2, 3, 4, 5].

References

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