

function DPLL-SATISFIABLE?(*s*) **returns** *true* or *false*

inputs: *s*, a sentence in propositional logic

clauses \leftarrow the set of clauses in the CNF representation of *s*

symbols \leftarrow a list of the proposition symbols in *s*

return DPLL(*clauses*, *symbols*, { })

function DPLL(*clauses*, *symbols*, *model*) **returns** *true* or *false*

if every clause in *clauses* is true in *model* **then return** *true*

if some clause in *clauses* is false in *model* **then return** *false*

P, *value* \leftarrow FIND-PURE-SYMBOL(*symbols*, *clauses*, *model*)

if *P* is non-null **then return** DPLL(*clauses*, *symbols* – *P*, *model* \cup {*P*=*value*})

P, *value* \leftarrow FIND-UNIT-CLAUSE(*clauses*, *model*)

if *P* is non-null **then return** DPLL(*clauses*, *symbols* – *P*, *model* \cup {*P*=*value*})

P \leftarrow FIRST(*symbols*); *rest* \leftarrow REST(*symbols*)

return DPLL(*clauses*, *rest*, *model* \cup {*P*=*true*}) **or**

DPLL(*clauses*, *rest*, *model* \cup {*P*=*false*})