

MiniSat

MiniSat's website: <http://minisat.se>

Installation:

Get MiniSat from *its website* (at the bottom, there are executables). If you use linux, you can compile your own executables. If you use windows, you need to get Cygwin installation from www.cygwin.com. Find files `cygwin1.dll` and `cygz.dll` and copy them to the folder with your MiniSat executable.

Running:

From commandline, call
`minisat.exe inputfile.in outputfile.out`

On-line version:

For experiments, you can also use the *online version of miniSAT*, without bothering with installation.

<http://www.msoos.org/2013/09/minisat-in-your-browser/>

Input file:

Comments start with `c`:

```
c ANY TEXT YOU LIKE (usually a description of what the file is)
```

The first non-comment line must be of the form:

```
p cnf NUMBER_OF_VARIABLES NUMBER_OF_CLAUSES
```

Clauses are given as a list of numbers, the last must be zero. Positive number n refers to the variable X_n , negative number $-n$ refers to negation of X_n . One line is one clause.

For example,

```
2 -1 4 0
```

describes the clause

X_2 or (neg X_1) or X_4

Output file:

SAT or UNSAT

If SAT, evaluation of variables follows: $n \dots X_n = \text{true}$, $-n \dots X_n = \text{false}$.

Detailed guide:

<http://www.dwheeler.com/essays/minisat-user-guide.html>