```
bash-4.2$ time ./glucose ../../../sat4jexample/test-factor-1.cnf
c
c This is glucose 4.0 --  based on MiniSAT (Many thanks to MiniSAT team)
c
c ========================================[ Problem Statistics ]=============================================
c |                                                                                                         |
c |  Number of variables:            12                                                                     |
c |  Number of clauses:             108                                                                     |
c |  Parse time:                   0.00 s                                                                   |
c |                                                                                                         |
c | Preprocesing is fully done
c |  Eliminated clauses:           0.00 Mb                                                                  |
c |  Simplification time:          0.00 s                                                                   |
c |                                                                                                         |
c ========================================[ MAGIC CONSTANTS ]================================================
c | Constants are supposed to work well together :-)                                                        |
c | however, if you find better choices, please let us known...                                             |
c |---------------------------------------------------------------------------------------------------------|
c | Adapt dynamically the solver after 100000 conflicts (restarts, reduction strategies...)                 |
c |---------------------------------------------------------------------------------------------------------|
c |                                | |                                 |                                  |
c | - Restarts:                    | - Reduce Clause DB:             | - Minimize Asserting:            |
c |   * LBD Queue    :     50      |   * First     :   2000          |    * size <  30                  |
c |   * Trail  Queue :   5000      |   * Inc       :    300          |    * lbd  <   6                  |
c |   * K            :   0.80      |   * Special   :   1000          |                                  |
c |   * R            :   1.40      |   * Protected :  (lbd)< 30      |                                  |
c |                                | |                                 |                                  |
c ================================[ Search Statistics (every  10000 conflicts) ]=========================
c |                                                                                                         |
c |          RESTARTS           |          ORIGINAL         |              LEARNT              | Progress |
c |       NB   Blocked  Avg Cfc |    Vars  Clauses Literals |   Red   Learnts    LBD2  Removed |          |
c =========================================================================================================
c last restart ## conflicts  :  0 0
c =========================================================================================================
c restarts              : 1 (0 conflicts in avg)
c blocked restarts      : 0 (multiple: 0)
c last block at restart : 0
c nb ReduceDB           : 0
c nb removed Clauses    : 0
c nb learnts DL2        : 0
c nb learnts size 2     : 0
c nb learnts size 1     : 0
c conflicts             : 0              (0 /sec)
c decisions             : 1              (0.00 % random) (690 /sec)
c propagations          : 5              (3451 /sec)
c nb reduced Clauses    : 0
c CPU time              : 0.001449 s

s SATISFIABLE

real    0m0.010s
user    0m0.002s
sys     0m0.002s
```

```
bash-4.2$ time ./glucose ../../../sat4jexample/test-factor-2.cnf
c
c This is glucose 4.0 --  based on MiniSAT (Many thanks to MiniSAT team)
c
c ========================================[ Problem Statistics ]=============================================
c |                                                                                                        |
WARNING! DIMACS header mismatch: wrong number of clauses.
c |  Number of variables:            11                                                                    |
c |  Number of clauses:              109                                                                   |
c |  Parse time:                    0.00 s                                                                 |
c |                                                                                                        |
c | Preprocesing is fully done
c |  Simplification time:           0.00 s                                                                 |
c |                                                                                                        |
c ========================================[ MAGIC CONSTANTS ]============================================
c | Constants are supposed to work well together :-)                                                       |
c | however, if you find better choices, please let us known...                                            |
c |--------------------------------------------------------------------------------------------------------|
c | Adapt dynamically the solver after 100000 conflicts (restarts, reduction strategies...)                |
c |--------------------------------------------------------------------------------------------------------|
c |                                |                                      |                                |
c | - Restarts:                    | - Reduce Clause DB:                  | - Minimize Asserting:          |
c |   * LBD Queue    :     50      |   * First     :   2000               |    * size <  30                |
c |   * Trail  Queue :   5000      |   * Inc       :    300               |    * lbd  <   6                |
c |   * K            :   0.80      |   * Special   :   1000               |                                |
c |   * R            :   1.40      |   * Protected :  (lbd)< 30           |                                |
c |                                |                                      |                                |
c ================================[ Search Statistics (every  10000 conflicts) ]=========================
c |                                                                                                        |
c |          RESTARTS           |          ORIGINAL         |              LEARNT              | Progress |
c |       NB   Blocked  Avg Cfc |    Vars  Clauses Literals |   Red   Learnts    LBD2  Removed |          |
c ========================================================================================================
c last restart ## conflicts  :  1 0
c ========================================================================================================
c restarts              : 1 (1 conflicts in avg)
c blocked restarts      : 0 (multiple: 0)
c last block at restart : 0
c nb ReduceDB           : 0
c nb removed Clauses    : 0
c nb learnts DL2        : 0
c nb learnts size 2     : 0
c nb learnts size 1     : 1
c conflicts             : 1             (620 /sec)
c decisions             : 2             (0.00 % random) (1240 /sec)
c propagations          : 11            (6820 /sec)
c nb reduced Clauses    : 0
c CPU time              : 0.001613 s

s SATISFIABLE

real    0m0.018s
user    0m0.002s
sys     0m0.001s
```

```
bash-4.2$ time ./glucose ../../../sat4jexample/test-factor-3.cnf
c
c This is glucose 4.0 --  based on MiniSAT (Many thanks to MiniSAT team)
c
c ========================================[ Problem Statistics ]=============================================
c |                                                                                                         |
c |  Number of variables:            82                                                                     |
c |  Number of clauses:            1213                                                                     |
c |  Parse time:                   0.00 s                                                                   |
c |                                                                                                         |
c | Preprocesing is fully done
c |  Eliminated clauses:           0.00 Mb                                                                  |
c |  Simplification time:          0.00 s                                                                   |
c |                                                                                                         |
c ========================================[ MAGIC CONSTANTS ]================================================
c | Constants are supposed to work well together :-)                                                        |
c | however, if you find better choices, please let us known...                                             |
c |---------------------------------------------------------------------------------------------------------|
c | Adapt dynamically the solver after 100000 conflicts (restarts, reduction strategies...)                 |
c |---------------------------------------------------------------------------------------------------------|
c |                                  |                                  |                                   |
c | - Restarts:                      | - Reduce Clause DB:              | - Minimize Asserting:             |
c |   * LBD Queue    :     50        |   * First     :   2000           |    * size <  30                   |
c |   * Trail  Queue :   5000        |   * Inc       :    300           |    * lbd  <   6                   |
c |   * K            :   0.80        |   * Special   :   1000           |                                   |
c |   * R            :   1.40        |   * Protected :  (lbd)< 30       |                                   |
c |                                  |                                  |                                   |
c ==================================[ Search Statistics (every  10000 conflicts) ]==========================
c |                                                                                                         |
c |          RESTARTS           |          ORIGINAL         |              LEARNT              | Progress |
c |       NB   Blocked  Avg Cfc |    Vars  Clauses Literals |   Red   Learnts    LBD2  Removed |          |
c =========================================================================================================
c last restart ## conflicts  :  106 2
c =========================================================================================================
c restarts              : 1 (106 conflicts in avg)
c blocked restarts      : 0 (multiple: 0)
c last block at restart : 0
c nb ReduceDB           : 0
c nb removed Clauses    : 0
c nb learnts DL2        : 25
c nb learnts size 2     : 13
c nb learnts size 1     : 4
c conflicts             : 106            (25310 /sec)
c decisions             : 132            (0.00 % random) (31519 /sec)
c propagations          : 1995           (476361 /sec)
c nb reduced Clauses    : 5
c CPU time              : 0.004188 s

s SATISFIABLE

real    0m0.020s
user    0m0.005s
sys     0m0.002s
```

```
bash-4.2$ time ./glucose ../../../sat4jexample/test-factor-4.cnf
c
c This is glucose 4.0 --  based on MiniSAT (Many thanks to MiniSAT team)
c
c ========================================[ Problem Statistics ]=============================================
c |                                                                                                         |
c |  Number of variables:           964                                                                     |
c |  Number of clauses:            2170                                                                     |
c |  Parse time:                   0.00 s                                                                   |
c |                                                                                                         |
c | Preprocesing is fully done
c |  Eliminated clauses:           0.01 Mb                                                                  |
c |  Simplification time:          0.00 s                                                                   |
c |                                                                                                         |
c ========================================[ MAGIC CONSTANTS ]================================================
c | Constants are supposed to work well together :-)                                                        |
c | however, if you find better choices, please let us known...                                             |
c |---------------------------------------------------------------------------------------------------------|
c | Adapt dynamically the solver after 100000 conflicts (restarts, reduction strategies...)                 |
c |---------------------------------------------------------------------------------------------------------|
c |                                 |                                 |                                     |
c | - Restarts:                     | - Reduce Clause DB:             | - Minimize Asserting:               |
c |   * LBD Queue    :     50       |   * First     :   2000          |    * size <  30                     |
c |   * Trail  Queue :   5000       |   * Inc       :    300          |    * lbd  <   6                     |
c |   * K            :   0.80       |   * Special   :   1000          |                                     |
c |   * R            :   1.40       |   * Protected :  (lbd)< 30      |                                     |
c |                                 |                                 |                                     |
c ================================[ Search Statistics (every  10000 conflicts) ]=========================
c |                                                                                                         |
c |          RESTARTS           |          ORIGINAL         |              LEARNT              | Progress |
c |       NB   Blocked  Avg Cfc |    Vars  Clauses Literals |   Red   Learnts    LBD2  Removed |          |
c =========================================================================================================
c last restart ## conflicts  :  191 2
c =========================================================================================================
c restarts              : 1 (191 conflicts in avg)
c blocked restarts      : 0 (multiple: 0)
c last block at restart : 0
c nb ReduceDB           : 0
c nb removed Clauses    : 0
c nb learnts DL2        : 15
c nb learnts size 2     : 9
c nb learnts size 1     : 2
c conflicts             : 191            (39841 /sec)
c decisions             : 356            (0.00 % random) (74259 /sec)
c propagations          : 11985          (2500000 /sec)
c nb reduced Clauses    : 9
c CPU time              : 0.004794 s

s SATISFIABLE

real    0m0.012s
user    0m0.005s
sys     0m0.002s
```

```
bash-4.2$ time ./glucose ../../../sat4jexample/test-factor-5.cnf
c
c This is glucose 4.0 --  based on MiniSAT (Many thanks to MiniSAT team)
c
c ========================================[ Problem Statistics ]=============================================
c |                                                                                                         |
c |  Number of variables:          1433                                                                     |
c |  Number of clauses:            7493                                                                     |
c |  Parse time:                   0.00 s                                                                   |
c |                                                                                                         |
c | Preprocesing is fully done
c |  Eliminated clauses:           0.00 Mb                                                                  |
c |  Simplification time:          0.00 s                                                                   |
c |                                                                                                         |
c ========================================[ MAGIC CONSTANTS ]================================================
c | Constants are supposed to work well together :-)                                                        |
c | however, if you find better choices, please let us known...                                             |
c |---------------------------------------------------------------------------------------------------------|
c | Adapt dynamically the solver after 100000 conflicts (restarts, reduction strategies...)                 |
c |---------------------------------------------------------------------------------------------------------|
c |                                 |                                    |                                  |
c | - Restarts:                     | - Reduce Clause DB:                | - Minimize Asserting:            |
c |   * LBD Queue    :     50       |   * First     :   2000             |    * size <  30                  |
c |   * Trail  Queue :   5000       |   * Inc       :    300             |    * lbd  <   6                  |
c |   * K            :   0.80       |   * Special   :   1000             |                                  |
c |   * R            :   1.40       |   * Protected :  (lbd)< 30         |                                  |
c |                                 |                                    |                                  |
c ================================[ Search Statistics (every  10000 conflicts) ]=========================
c |                                                                                                         |
c |          RESTARTS           |          ORIGINAL         |              LEARNT              | Progress |
c |       NB   Blocked  Avg Cfc |    Vars  Clauses Literals |   Red   Learnts    LBD2  Removed |          |
c =========================================================================================================
c last restart ## conflicts  :  275 11
c =========================================================================================================
c restarts              : 1 (275 conflicts in avg)
c blocked restarts      : 0 (multiple: 0)
c last block at restart : 0
c nb ReduceDB           : 0
c nb removed Clauses    : 0
c nb learnts DL2        : 9
c nb learnts size 2     : 8
c nb learnts size 1     : 0
c conflicts             : 275            (20870 /sec)
c decisions             : 516            (0.00 % random) (39159 /sec)
c propagations          : 36889          (2799499 /sec)
c nb reduced Clauses    : 4
c CPU time              : 0.013177 s

s SATISFIABLE

real    0m0.035s
user    0m0.013s
sys     0m0.003s
```

```
bash-4.2$ time ./glucose ../../../sat4jexample/test-factor-6.cnf
c
c This is glucose 4.0 --  based on MiniSAT (Many thanks to MiniSAT team)
c
c ========================================[ Problem Statistics ]=============================================
c |                                                                                                        |
c |  Number of variables:          1433                                                                    |
c |  Number of clauses:            7493                                                                    |
c |  Parse time:                   0.00 s                                                                  |
c |                                                                                                        |
c | Preprocesing is fully done
c |  Eliminated clauses:           0.00 Mb                                                                 |
c |  Simplification time:          0.00 s                                                                  |
c |                                                                                                        |
c ========================================[ MAGIC CONSTANTS ]================================================
c | Constants are supposed to work well together :-)                                                       |
c | however, if you find better choices, please let us known...                                            |
c |--------------------------------------------------------------------------------------------------------|
c | Adapt dynamically the solver after 100000 conflicts (restarts, reduction strategies...)                |
c |--------------------------------------------------------------------------------------------------------|
c |                                |                                |                                      |
c | - Restarts:                    | - Reduce Clause DB:            | - Minimize Asserting:                |
c |   * LBD Queue    :     50      |   * First     :   2000         |    * size <  30                      |
c |   * Trail  Queue :   5000      |   * Inc       :    300         |    * lbd  <   6                      |
c |   * K            :   0.80      |   * Special   :   1000         |                                      |
c |   * R            :   1.40      |   * Protected :  (lbd)< 30     |                                      |
c |                                |                                |                                      |
c ================================[ Search Statistics (every  10000 conflicts) ]=========================
c |                                                                                                        |
c |          RESTARTS           |          ORIGINAL         |              LEARNT              | Progress |
c |       NB   Blocked  Avg Cfc |    Vars  Clauses Literals |   Red   Learnts    LBD2  Removed |          |
c ========================================================================================================
c ========================================================================================================
c restarts              : 1 (4377 conflicts in avg)
c blocked restarts      : 0 (multiple: 0)
c last block at restart : 0
c nb ReduceDB           : 1
c nb removed Clauses    : 1001
c nb learnts DL2        : 133
c nb learnts size 2     : 57
c nb learnts size 1     : 3
c conflicts             : 4377           (32808 /sec)
c decisions             : 5511           (0.00 % random) (41308 /sec)
c propagations          : 565347         (4237539 /sec)
c nb reduced Clauses    : 65
c CPU time              : 0.133414 s

s UNSATISFIABLE

real    0m0.150s
user    0m0.134s
sys     0m0.007s
bash-4.2$
```

```
bash-4.2$ time ./glucose ../../../sat4jexample/test-factor-7.cnf
c
c This is glucose 4.0 --  based on MiniSAT (Many thanks to MiniSAT team)
c
c ========================================[ Problem Statistics ]=============================================
c |                                                                                                        |
c |  Number of variables:           155                                                                    |
c |  Number of clauses:            1067                                                                    |
c |  Parse time:                   0.00 s                                                                  |
c |                                                                                                        |
c | Preprocesing is fully done
c |  Eliminated clauses:           0.00 Mb                                                                 |
c |  Simplification time:          0.00 s                                                                  |
c |                                                                                                        |
c ========================================[ MAGIC CONSTANTS ]================================================
c | Constants are supposed to work well together :-)                                                       |
c | however, if you find better choices, please let us known...                                            |
c |--------------------------------------------------------------------------------------------------------|
c | Adapt dynamically the solver after 100000 conflicts (restarts, reduction strategies...)                |
c |--------------------------------------------------------------------------------------------------------|
c |                                |                                 |                                     |
c | - Restarts:                    | - Reduce Clause DB:             | - Minimize Asserting:               |
c |   * LBD Queue    :     50      |   * First     :   2000          |    * size <  30                     |
c |   * Trail  Queue :   5000      |   * Inc       :    300          |    * lbd  <   6                     |
c |   * K            :   0.80      |   * Special   :   1000          |                                     |
c |   * R            :   1.40      |   * Protected :  (lbd)< 30      |                                     |
c |                                |                                 |                                     |
c ================================[ Search Statistics (every  10000 conflicts) ]=========================
c |                                                                                                        |
c |          RESTARTS           |          ORIGINAL         |              LEARNT              | Progress |
c |       NB   Blocked  Avg Cfc |    Vars  Clauses Literals |   Red   Learnts    LBD2  Removed |          |
c ========================================================================================================
c last restart ## conflicts  :  28 9
c ========================================================================================================
c restarts              : 1 (28 conflicts in avg)
c blocked restarts      : 0 (multiple: 0)
c last block at restart : 0
c nb ReduceDB           : 0
c nb removed Clauses    : 0
c nb learnts DL2        : 5
c nb learnts size 2     : 1
c nb learnts size 1     : 0
c conflicts             : 28             (29197 /sec)
c decisions             : 72             (0.00 % random) (75078 /sec)
c propagations          : 376            (392075 /sec)
c nb reduced Clauses    : 6
c CPU time              : 0.000959 s

s SATISFIABLE

real    0m0.014s
user    0m0.001s
sys     0m0.003s
```

```
bash-4.2$ time ./glucose ../../../sat4jexample/test-factor-8.cnf
c
c This is glucose 4.0 --  based on MiniSAT (Many thanks to MiniSAT team)
c
c ========================================[ Problem Statistics ]===========================================
c |                                                                                                       |
c |  Number of variables:           256                                                                   |
c |  Number of clauses:            6336                                                                   |
c |  Parse time:                   0.00 s                                                                 |
c |                                                                                                       |
c | Preprocesing is fully done
c |  Eliminated clauses:           0.00 Mb                                                                |
c |  Simplification time:          0.01 s                                                                 |
c |                                                                                                       |
c ========================================[ MAGIC CONSTANTS ]==============================================
c | Constants are supposed to work well together :-)                                                      |
c | however, if you find better choices, please let us known...                                           |
c |-------------------------------------------------------------------------------------------------------|
c | Adapt dynamically the solver after 100000 conflicts (restarts, reduction strategies...)               |
c |-------------------------------------------------------------------------------------------------------|
c |                                |                                       |                              |
c | - Restarts:                    | - Reduce Clause DB:                   | - Minimize Asserting:        |
c |   * LBD Queue    :     50      |   * First     :   2000                |    * size <  30              |
c |   * Trail  Queue :   5000      |   * Inc       :    300                |    * lbd  <   6              |
c |   * K            :   0.80      |   * Special   :   1000                |                              |
c |   * R            :   1.40      |   * Protected :  (lbd)< 30            |                              |
c |                                |                                       |                              |
c ================================[ Search Statistics (every  10000 conflicts) ]=========================
c |                                                                                                       |
c |          RESTARTS           |          ORIGINAL         |              LEARNT              | Progress |
c |       NB   Blocked  Avg Cfc |    Vars  Clauses Literals |   Red   Learnts    LBD2  Removed |          |
c =======================================================================================================
c last restart ## conflicts  :  5 63
c =======================================================================================================
c restarts              : 1 (5 conflicts in avg)
c blocked restarts      : 0 (multiple: 0)
c last block at restart : 0
c nb ReduceDB           : 0
c nb removed Clauses    : 0
c nb learnts DL2        : 0
c nb learnts size 2     : 0
c nb learnts size 1     : 0
c conflicts             : 5              (475 /sec)
c decisions             : 70             (0.00 % random) (6648 /sec)
c propagations          : 276            (26213 /sec)
c nb reduced Clauses    : 0
c CPU time              : 0.010529 s

s SATISFIABLE

real    0m0.028s
user    0m0.011s
sys     0m0.002s
```

```
bash-4.2$ time ./glucose ../../../sat4jexample/test-factor-9.cnf
c
c This is glucose 4.0 --  based on MiniSAT (Many thanks to MiniSAT team)
c
c ========================================[ Problem Statistics ]=============================================
c |                                                                                                         |
c |  Number of variables:           718                                                                     |
c |  Number of clauses:            4806                                                                     |
c |  Parse time:                   0.00 s                                                                   |
c |                                                                                                         |
c | Preprocesing is fully done
c |  Eliminated clauses:           0.00 Mb                                                                  |
c |  Simplification time:          0.00 s                                                                   |
c |                                                                                                         |
c ========================================[ MAGIC CONSTANTS ]================================================
c | Constants are supposed to work well together :-)                                                        |
c | however, if you find better choices, please let us known...                                             |
c |---------------------------------------------------------------------------------------------------------|
c | Adapt dynamically the solver after 100000 conflicts (restarts, reduction strategies...)                 |
c |---------------------------------------------------------------------------------------------------------|
c |                                 |                                 |                                     |
c | - Restarts:                     | - Reduce Clause DB:             | - Minimize Asserting:               |
c |   * LBD Queue    :     50       |   * First     :   2000          |    * size <  30                     |
c |   * Trail  Queue :   5000       |   * Inc       :    300          |    * lbd  <   6                     |
c |   * K            :   0.80       |   * Special   :   1000          |                                     |
c |   * R            :   1.40       |   * Protected :  (lbd)< 30      |                                     |
c |                                 |                                 |                                     |
c ==================================[ Search Statistics (every  10000 conflicts) ]=========================
c |                                                                                                         |
c |          RESTARTS           |          ORIGINAL         |              LEARNT              | Progress |
c |       NB   Blocked  Avg Cfc |    Vars  Clauses Literals |   Red   Learnts    LBD2  Removed |          |
c =========================================================================================================
c last restart ## conflicts  :  656 13
c =========================================================================================================
c restarts              : 7 (309 conflicts in avg)
c blocked restarts      : 0 (multiple: 0)
c last block at restart : 0
c nb ReduceDB           : 1
c nb removed Clauses    : 983
c nb learnts DL2        : 229
c nb learnts size 2     : 93
c nb learnts size 1     : 9
c conflicts             : 2166           (80311 /sec)
c decisions             : 3852           (0.00 % random) (142825 /sec)
c propagations          : 114961         (4262551 /sec)
c nb reduced Clauses    : 99
c CPU time              : 0.02697 s

s SATISFIABLE

real    0m0.049s
user    0m0.027s
sys     0m0.004s
```

```
bash-4.2$ time ./glucose ../../../sat4jexample/test-factor-10.cnf
c
c This is glucose 4.0 --  based on MiniSAT (Many thanks to MiniSAT team)
c
c ========================================[ Problem Statistics ]===========================================
c |                                                                                                       |
c |  Number of variables:          3357                                                                   |
c |  Number of clauses:           13396                                                                   |
c |  Parse time:                   0.01 s                                                                 |
c |                                                                                                       |
c | Preprocesing is fully done
c |  Eliminated clauses:           0.02 Mb                                                                |
c |  Simplification time:          0.01 s                                                                 |
c |                                                                                                       |
c ========================================[ MAGIC CONSTANTS ]==============================================
c | Constants are supposed to work well together :-)                                                      |
c | however, if you find better choices, please let us known...                                           |
c |-------------------------------------------------------------------------------------------------------|
c | Adapt dynamically the solver after 100000 conflicts (restarts, reduction strategies...)               |
c |-------------------------------------------------------------------------------------------------------|
c |                                 |                                |                                    |
c | - Restarts:                     | - Reduce Clause DB:            | - Minimize Asserting:              |
c |   * LBD Queue    :     50       |   * First     :   2000         |    * size <  30                    |
c |   * Trail  Queue :   5000       |   * Inc       :    300         |    * lbd  <   6                    |
c |   * K            :   0.80       |   * Special   :   1000         |                                    |
c |   * R            :   1.40       |   * Protected :  (lbd)< 30     |                                    |
c |                                 |                                |                                    |
c ================================[ Search Statistics (every  10000 conflicts) ]=========================
c |                                                                                                       |
c |          RESTARTS           |          ORIGINAL         |              LEARNT              | Progress |
c |       NB   Blocked  Avg Cfc |    Vars  Clauses Literals |   Red   Learnts    LBD2  Removed |          |
c =======================================================================================================
c last restart ## conflicts  :  811 111
c =======================================================================================================
c restarts              : 3 (357 conflicts in avg)
c blocked restarts      : 0 (multiple: 0)
c last block at restart : 0
c nb ReduceDB           : 0
c nb removed Clauses    : 0
c nb learnts DL2        : 282
c nb learnts size 2     : 175
c nb learnts size 1     : 4
c conflicts             : 1072           (47480 /sec)
c decisions             : 3778           (0.00 % random) (167331 /sec)
c propagations          : 47222          (2091505 /sec)
c nb reduced Clauses    : 8
c CPU time              : 0.022578 s

s SATISFIABLE

real    0m0.048s
user    0m0.023s
sys     0m0.003s
```