#Variables: 41179 (543 in objective)

  - 5754 different domains in [0,43200] with a largest complexity of 2.

#kBoolOr: 46 (#literals: 176)

#kExactlyOne: 2775 (#literals: 9608)

#kInterval: 14177 (#enforced: 14177)

#kLinear1: 32636 (#enforced: 32636)

#kLinear2: 23646 (#enforced: 17478)

#kLinear3: 3238

#kLinearN: 5571 (#terms: 27206)

#kNoOverlap: 68 (#intervals: 14177, #optional: 14177)

Preloading model.

#Bound  64.37s best:-inf  next:[-0,13039540] initial\_domain

Starting Search at 64.46s with 12 workers and subsolvers: [ default\_lp, fixed, reduced\_costs, pseudo\_costs, no\_lp, max\_lp, core, quick\_restart, quick\_restart\_no\_lp, feasibility\_pump, rnd\_var\_lns\_default, rnd\_cst\_lns\_default, graph\_var\_lns\_default, graph\_cst\_lns\_default, scheduling\_time\_window\_lns\_default, scheduling\_random\_lns\_default, rins\_lns\_default, rens\_lns\_default ]

#Bound 205.91s best:-inf  next:[-0,8349769] pseudo\_costs initial\_propagation

#Bound 206.19s best:-inf  next:[-0,8324278] pseudo\_costs

#Bound 206.47s best:-inf  next:[-0,8323043] pseudo\_costs

#Bound 206.88s best:-inf  next:[-0,8306981] reduced\_costs

#Bound 207.11s best:-inf  next:[-0,7900442] max\_lp initial\_propagation

#Bound 207.43s best:-inf  next:[-0,7900421] max\_lp

#1     208.21s best:-0    next:[1,7900421] pseudo\_costs fixed\_bools:1/41248

#2     209.59s best:13020 next:[13021,7900421] graph\_var\_lns\_default(d=0.50 s=3272 t=0.10 p=0.00)

#3     211.69s best:263568 next:[263569,7900421] rins\_lns\_default\_lp(d=0.50 s=3276 t=0.10 p=0.00)

#4     212.94s best:263945 next:[263946,7900421] rnd\_var\_lns\_default(d=0.71 s=3277 t=0.10 p=1.00)

#5     219.50s best:267860 next:[267861,7900421] quick\_restart fixed\_bools:0/41836

#6     231.81s best:355200 next:[355201,7900421] graph\_cst\_lns\_default(d=0.71 s=3280 t=0.10 p=1.00)

#7     232.14s best:800365 next:[800366,7900421] quick\_restart fixed\_bools:0/42362

#8     238.80s best:801574 next:[801575,7900421] quick\_restart\_no\_lp fixed\_bools:0/43085

#9     255.38s best:848999 next:[849000,7900421] rins\_lns\_default\_lp(d=0.71 s=3283 t=0.10 p=1.00)

#10    257.01s best:891854 next:[891855,7900421] rnd\_var\_lns\_default(d=0.81 s=3284 t=0.10 p=1.00)

#11    259.33s best:932852 next:[932853,7900421] rnd\_cst\_lns\_default(d=0.81 s=3285 t=0.10 p=1.00)

#12    275.46s best:935849 next:[935850,7900421] quick\_restart fixed\_bools:1/43842

#13    285.16s best:1342046 next:[1342047,7900421] quick\_restart\_no\_lp fixed\_bools:0/44111

#Bound 288.09s best:1342046 next:[1342047,7856491] pseudo\_costs

#Bound 289.55s best:1342046 next:[1342047,7855492] pseudo\_costs

#Bound 290.78s best:1342046 next:[1342047,7849554] pseudo\_costs

#Bound 292.19s best:1342046 next:[1342047,7849443] pseudo\_costs

#Bound 292.56s best:1342046 next:[1342047,7849350] pseudo\_costs

#Bound 294.07s best:1342046 next:[1342047,7847728] pseudo\_costs

#Bound 295.07s best:1342046 next:[1342047,7847364] pseudo\_costs

#Bound 295.41s best:1342046 next:[1342047,7847110] pseudo\_costs

#Bound 297.47s best:1342046 next:[1342047,7846392] pseudo\_costs

#Bound 298.52s best:1342046 next:[1342047,7846232] pseudo\_costs

#Bound 298.88s best:1342046 next:[1342047,7846231] pseudo\_costs

#Bound 300.17s best:1342046 next:[1342047,7845388] pseudo\_costs

#Bound 301.27s best:1342046 next:[1342047,7844284] pseudo\_costs

#Bound 301.63s best:1342046 next:[1342047,7844235] pseudo\_costs

#Bound 302.84s best:1342046 next:[1342047,7843051] pseudo\_costs

#Bound 303.99s best:1342046 next:[1342047,7842255] pseudo\_costs

#Bound 304.35s best:1342046 next:[1342047,7841944] pseudo\_costs

#Bound 305.49s best:1342046 next:[1342047,7841603] pseudo\_costs

#Bound 306.54s best:1342046 next:[1342047,7841598] pseudo\_costs

#Bound 306.93s best:1342046 next:[1342047,7841541] pseudo\_costs

#Bound 308.17s best:1342046 next:[1342047,7841396] pseudo\_costs

#Bound 309.50s best:1342046 next:[1342047,7841382] pseudo\_costs

#Bound 309.86s best:1342046 next:[1342047,7841319] pseudo\_costs

#Bound 311.05s best:1342046 next:[1342047,7841258] pseudo\_costs

#Bound 312.21s best:1342046 next:[1342047,7841257] pseudo\_costs

#14    324.72s best:1347321 next:[1347322,7841257] quick\_restart fixed\_bools:1/44807

#15    339.53s best:1347804 next:[1347805,7841257] quick\_restart fixed\_bools:1/44828

#16    346.51s best:1351299 next:[1351300,7841257] quick\_restart fixed\_bools:1/45020

#17    348.61s best:1366922 next:[1366923,7841257] rins\_lns\_default\_lp(d=0.81 s=3290 t=0.10 p=1.00)

#18    357.47s best:1516234 next:[1516235,7841257] rnd\_var\_lns\_default(d=0.88 s=3291 t=0.10 p=1.00)

#Bound 364.73s best:1516234 next:[1516235,7841194] pseudo\_costs

#19    371.43s best:1540828 next:[1540829,7841194] graph\_cst\_lns\_default(d=0.72 s=3294 t=0.10 p=0.67) [hint]

#20    418.01s best:1542576 next:[1542577,7841194] scheduling\_random\_lns\_default(d=0.12 s=3296 t=0.10 p=0.00) [hint]

#21    469.45s best:1558722 next:[1558723,7841194] quick\_restart\_no\_lp fixed\_bools:0/48999

#22    487.65s best:1559802 next:[1559803,7841194] quick\_restart\_no\_lp fixed\_bools:0/49076

#23    510.61s best:1560141 next:[1560142,7841194] quick\_restart fixed\_bools:2/47928

#24    539.23s best:1693910 next:[1693911,7841194] rins\_lns\_default\_lp(d=0.88 s=3311 t=0.10 p=0.80)

#25    545.60s best:1694763 next:[1694764,7841194] graph\_var\_lns\_default(d=0.24 s=3314 t=0.10 p=0.33)

#26    547.23s best:1706220 next:[1706221,7841194] graph\_cst\_lns\_default(d=0.61 s=3315 t=0.10 p=0.50)

#27    570.57s best:1710135 next:[1710136,7841194] quick\_restart\_no\_lp fixed\_bools:1/53267

#28    659.92s best:1761782 next:[1761783,7841194] graph\_var\_lns\_default(d=0.33 s=3321 t=0.10 p=0.43)

#29    691.52s best:1777928 next:[1777929,7841194] quick\_restart fixed\_bools:3/51322

#30    731.07s best:1812617 next:[1812618,7841194] quick\_restart fixed\_bools:3/51381

#31    755.84s best:1818524 next:[1818525,7841194] graph\_var\_lns\_default(d=0.44 s=3328 t=0.10 p=0.50)

#32    876.34s best:1912193 next:[1912194,7841194] rnd\_cst\_lns\_default(d=0.75 s=3334 t=0.10 p=0.56)

#33    941.50s best:1913546 next:[1913547,7841194] quick\_restart fixed\_bools:4/60080

#34    1032.88s best:1916069 next:[1916070,7841194] quick\_restart\_no\_lp fixed\_bools:2/58041

#35    1038.08s best:1968244 next:[1968245,7841194] rins\_lns\_default\_lp(d=0.73 s=3346 t=0.10 p=0.50)

#36    1043.02s best:1985816 next:[1985817,7841194] graph\_cst\_lns\_default(d=0.39 s=3357 t=0.10 p=0.42)

#37    1069.33s best:1989679 next:[1989680,7841194] quick\_restart fixed\_bools:5/62495

#38    1158.96s best:1995068 next:[1995069,7841194] quick\_restart fixed\_bools:5/63199

#39    1166.10s best:2014729 next:[2014730,7841194] graph\_var\_lns\_default(d=0.27 s=3370 t=0.10 p=0.43)

#40    1274.77s best:2132429 next:[2132430,7841194] graph\_cst\_lns\_default(d=0.49 s=3378 t=0.10 p=0.47)

#41    1326.54s best:2133689 next:[2133690,7841194] quick\_restart\_no\_lp fixed\_bools:3/62126

#42    1347.59s best:2134092 next:[2134093,7841194] quick\_restart\_no\_lp fixed\_bools:3/62199

#43    1360.39s best:2192979 next:[2192980,7841194] quick\_restart\_no\_lp fixed\_bools:3/62224

#44    1395.58s best:2195304 next:[2195305,7841194] quick\_restart fixed\_bools:7/65763

#45    1442.27s best:2197355 next:[2197356,7841194] rnd\_cst\_lns\_default(d=0.73 s=3390 t=0.10 p=0.53)

#46    1482.56s best:2198109 next:[2198110,7841194] quick\_restart fixed\_bools:9/68346

#47    1572.84s best:2200147 next:[2200148,7841194] quick\_restart\_no\_lp fixed\_bools:4/66408

#48    1574.35s best:2238808 next:[2238809,7841194] quick\_restart fixed\_bools:11/68515

#49    1598.30s best:2244241 next:[2244242,7841194] quick\_restart fixed\_bools:11/69024

#50    1717.54s best:2244482 next:[2244483,7841194] graph\_var\_lns\_default(d=0.42 s=3412 t=0.10 p=0.50)

#51    1718.97s best:2259179 next:[2259180,7841194] quick\_restart fixed\_bools:12/69465

#52    1719.19s best:2302748 next:[2302749,7841194] rins\_lns\_default\_lp(d=0.69 s=3409 t=0.10 p=0.47)

#53    1730.81s best:2306356 next:[2306357,7841194] quick\_restart\_no\_lp fixed\_bools:5/68723

#54    1773.07s best:2315940 next:[2315941,7841194] graph\_cst\_lns\_default(d=0.50 s=3420 t=0.10 p=0.48)

#55    1835.21s best:2330878 next:[2330879,7841194] quick\_restart\_no\_lp fixed\_bools:6/71427

#56    1890.32s best:2344608 next:[2344609,7841194] quick\_restart\_no\_lp fixed\_bools:8/72534

#57    1907.13s best:2345973 next:[2345974,7841194] quick\_restart fixed\_bools:18/75967

#58    1960.31s best:2346119 next:[2346120,7841194] quick\_restart\_no\_lp fixed\_bools:8/75593

#59    1961.44s best:2520658 next:[2520659,7841194] graph\_var\_lns\_default(d=0.42 s=3426 t=0.10 p=0.50)

#60    1983.31s best:2524637 next:[2524638,7841194] quick\_restart fixed\_bools:19/77160

#61    2008.47s best:2525984 next:[2525985,7841194] quick\_restart\_no\_lp fixed\_bools:8/76579

#62    2097.12s best:2526128 next:[2526129,7841194] quick\_restart fixed\_bools:22/77726

#63    2128.45s best:2544430 next:[2544431,7841194] graph\_var\_lns\_default(d=0.42 s=3440 t=0.10 p=0.50)

#64    2152.61s best:2545554 next:[2545555,7841194] quick\_restart\_no\_lp fixed\_bools:12/80373

#65    2159.72s best:2546644 next:[2546645,7841194] quick\_restart fixed\_bools:22/80752

#66    2161.10s best:2722678 next:[2722679,7841194] quick\_restart\_no\_lp fixed\_bools:12/80570

#67    2194.91s best:2746172 next:[2746173,7841194] quick\_restart\_no\_lp fixed\_bools:13/81170

#68    2211.66s best:2746181 next:[2746182,7841194] quick\_restart\_no\_lp fixed\_bools:13/81191

#69    2213.98s best:2830135 next:[2830136,7841194] graph\_var\_lns\_default(d=0.51 s=3447 t=0.10 p=0.52)

#70    2277.66s best:3686255 next:[3686256,7841194] quick\_restart\_no\_lp fixed\_bools:13/82487

#71    2456.36s best:3710849 next:[3710850,7841194] quick\_restart\_no\_lp fixed\_bools:15/85947

#72    2572.94s best:3713011 next:[3713012,7841194] quick\_restart\_no\_lp fixed\_bools:17/87326

#73    2607.91s best:3715952 next:[3715953,7841194] quick\_restart\_no\_lp fixed\_bools:17/87365

#74    2619.50s best:3716373 next:[3716374,7841194] quick\_restart\_no\_lp fixed\_bools:17/87518

#75    2644.73s best:3751096 next:[3751097,7841194] quick\_restart\_no\_lp fixed\_bools:17/87539

#76    2723.28s best:3756199 next:[3756200,7841194] quick\_restart\_no\_lp fixed\_bools:18/88715

#77    2770.53s best:3756536 next:[3756537,7841194] quick\_restart\_no\_lp fixed\_bools:18/89901

#78    2783.79s best:3759423 next:[3759424,7841194] quick\_restart\_no\_lp fixed\_bools:18/91003

#79    2800.06s best:3761287 next:[3761288,7841194] quick\_restart\_no\_lp fixed\_bools:18/91275

#80    2822.67s best:3766390 next:[3766391,7841194] rnd\_var\_lns\_default(d=0.77 s=3459 t=0.10 p=0.52) [hint]

#81    2913.67s best:3768091 next:[3768092,7841194] quick\_restart\_no\_lp fixed\_bools:18/91449

#82    2926.57s best:3768546 next:[3768547,7841194] quick\_restart\_no\_lp fixed\_bools:18/92186

#83    2952.83s best:3771181 next:[3771182,7841194] quick\_restart\_no\_lp fixed\_bools:18/92565

#84    2995.46s best:3773636 next:[3773637,7841194] quick\_restart\_no\_lp fixed\_bools:18/92612

#85    3002.43s best:3806605 next:[3806606,7841194] quick\_restart fixed\_bools:30/88070

#86    3024.90s best:3810567 next:[3810568,7841194] quick\_restart fixed\_bools:30/88111

#87    3109.10s best:3813377 next:[3813378,7841194] quick\_restart fixed\_bools:30/88123

#88    3119.55s best:3815998 next:[3815999,7841194] quick\_restart\_no\_lp fixed\_bools:19/92696

#89    3135.23s best:3833299 next:[3833300,7841194] quick\_restart\_no\_lp fixed\_bools:19/92723

#90    3190.79s best:3834776 next:[3834777,7841194] quick\_restart\_no\_lp fixed\_bools:19/93938

#91    3311.37s best:3837540 next:[3837541,7841194] quick\_restart fixed\_bools:30/89997

#92    3339.71s best:3839633 next:[3839634,7841194] quick\_restart\_no\_lp fixed\_bools:20/95773

#93    3386.51s best:3842440 next:[3842441,7841194] quick\_restart\_no\_lp fixed\_bools:21/97133

#94    3427.45s best:3842971 next:[3842972,7841194] quick\_restart fixed\_bools:34/90257

#95    3455.96s best:3852668 next:[3852669,7841194] quick\_restart\_no\_lp fixed\_bools:21/97623

#96    3560.32s best:3853148 next:[3853149,7841194] rnd\_cst\_lns\_default(d=0.67 s=3481 t=0.10 p=0.50)

#97    3598.42s best:3853501 next:[3853502,7841194] quick\_restart fixed\_bools:37/91969

#98    3683.84s best:3854116 next:[3854117,7841194] quick\_restart fixed\_bools:40/92470

#99    3687.77s best:3854950 next:[3854951,7841194] quick\_restart\_no\_lp fixed\_bools:24/102899

#100   3779.73s best:3859508 next:[3859509,7841194] quick\_restart\_no\_lp fixed\_bools:26/103969

#101   3857.16s best:3862318 next:[3862319,7841194] quick\_restart\_no\_lp fixed\_bools:27/105494

#102   3911.66s best:3864506 next:[3864507,7841194] quick\_restart\_no\_lp fixed\_bools:28/105748

#103   3998.73s best:3865994 next:[3865995,7841194] quick\_restart\_no\_lp fixed\_bools:28/107135

#104   4019.45s best:3869111 next:[3869112,7841194] quick\_restart fixed\_bools:47/95805

#105   4068.84s best:3869856 next:[3869857,7841194] quick\_restart\_no\_lp fixed\_bools:28/108294

#106   4080.03s best:3870174 next:[3870175,7841194] quick\_restart\_no\_lp fixed\_bools:28/108322

#107   4149.38s best:3870674 next:[3870675,7841194] graph\_var\_lns\_default(d=0.36 s=3503 t=0.10 p=0.48)

#108   4277.51s best:3872124 next:[3872125,7841194] quick\_restart\_no\_lp fixed\_bools:30/109927

#109   4332.77s best:3873129 next:[3873130,7841194] quick\_restart fixed\_bools:59/98821

#110   4569.59s best:3873313 next:[3873314,7841194] quick\_restart fixed\_bools:60/99170

#111   4665.78s best:3874357 next:[3874358,7841194] quick\_restart\_no\_lp fixed\_bools:36/114584

#112   4779.02s best:3881144 next:[3881145,7841194] quick\_restart\_no\_lp fixed\_bools:37/116287

Sub-solver search statistics:

  'reduced\_costs':

     LP statistics:

       final dimension: 15081 rows, 41247 columns, 56240 entries with magnitude in [9.971938e-04, 1.000000e+00]

       total number of simplex iterations: 1267837

       num solves:

         - #OPTIMAL: 24335

         - #DUAL\_UNBOUNDED: 8003

         - #INIT: 12

         - #PRIMAL\_FEASIBLE: 2

         - #DUAL\_FEASIBLE: 112022

       managed constraints: 93727

       merged constraints: 68020

       coefficient strenghtenings: 376

       num simplifications: 216

       total cuts added: 57429 (out of 125549 calls)

         - 'CG': 7492

         - 'IB': 45311

         - 'MIR\_1': 506

         - 'MIR\_2': 2273

         - 'MIR\_3': 1033

         - 'MIR\_4': 389

         - 'MIR\_5': 162

         - 'MIR\_6': 96

         - 'NoOverlapEnergy\_opt': 25

         - 'NoOverlapEnergy\_opt\_lifted': 11

         - 'ZERO\_HALF': 114

         - 'clique': 17

  'pseudo\_costs':

     LP statistics:

       final dimension: 19611 rows, 41247 columns, 61168 entries with magnitude in [1.183551e-02, 1.000000e+00]

       total number of simplex iterations: 461621

       num solves:

         - #OPTIMAL: 37243

         - #DUAL\_UNBOUNDED: 280

         - #INIT: 5

         - #PRIMAL\_FEASIBLE: 1

         - #DUAL\_FEASIBLE: 36826

       managed constraints: 94195

       merged constraints: 45687

       coefficient strenghtenings: 405

       num simplifications: 213

       total cuts added: 72733 (out of 120639 calls)

         - 'CG': 3893

         - 'IB': 65101

         - 'MIR\_1': 314

         - 'MIR\_2': 1549

         - 'MIR\_3': 1023

         - 'MIR\_4': 437

         - 'MIR\_5': 158

         - 'MIR\_6': 107

         - 'NoOverlapEnergy\_opt': 13

         - 'NoOverlapEnergy\_opt\_lifted': 4

         - 'ZERO\_HALF': 71

         - 'clique': 63

  'max\_lp':

     LP statistics:

       final dimension: 11500 rows, 41247 columns, 42192 entries with magnitude in [1.243294e-02, 1.000000e+00]

       total number of simplex iterations: 111042

       num solves:

         - #OPTIMAL: 65083

         - #DUAL\_UNBOUNDED: 33

         - #DUAL\_FEASIBLE: 7902

       managed constraints: 93548

       merged constraints: 17669

       coefficient strenghtenings: 55

       total cuts added: 17250 (out of 34929 calls)

         - 'IB': 17250

Solutions found per subsolver:

  'graph\_cst\_lns\_default': 6

  'graph\_var\_lns\_default': 10

  'pseudo\_costs': 1

  'quick\_restart': 31

  'quick\_restart\_no\_lp': 49

  'rins\_lns\_default\_lp': 6

  'rnd\_cst\_lns\_default': 4

  'rnd\_var\_lns\_default': 4

  'scheduling\_random\_lns\_default': 1

Objective bounds found per subsolver:

  'initial\_domain': 1

  'max\_lp': 2

  'pseudo\_costs': 29

  'reduced\_costs': 1

CpSolverResponse summary:

status: FEASIBLE

objective: 3881144

best\_bound: 7841194

booleans: 46954

conflicts: 10078

branches: 303429

propagations: 13625882

integer\_propagations: 11642796

restarts: 82381

lp\_iterations: 461621

walltime: 6008.08

usertime: 6008.08

deterministic\_time: 1248.77

primal\_integral: 18975

Решение:

Статус = FEASIBLE

Значение целевой функции: 3881144.0

[Done] exited with code=0 in 6070.565 seconds