<untitled> #21

MODELS
Model-01   Flashlight
Model-02   Radio
Model-03   Toy Car
Model-04   Ball Point Pen

If model-01 is disassemble in line -- 1; otherwise -- 0 = 1
If model-02 is disassemble in line -- 1; otherwise -- 0 = 0
If model-03 is disassemble in line -- 1; otherwise -- 0 = 0
If model-04 is disassemble in line -- 1; otherwise -- 0 = 1

Warning: your license will expire in 3 days

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Gurobi Optimizer version 9.0.3 build v9.0.3rc0 (win64)
Optimize a model with 4131 rows, 567 columns and 20520 nonzeros
Model fingerprint: 0xedc3a598
Variable types: 30 continuous, 537 integer (537 binary)
Coefficient statistics:
  Matrix range   [1e+00, 1e+05]
  Objective range   [5e-06, 1e+00]
  Bounds range   [1e+00, 1e+00]
  RHS range   [1e+00, 3e+05]
Presolve removed 3775 rows and 396 columns
Presolve time: 0.05s
Presolved: 356 rows, 171 columns, 2356 nonzeros
Variable types: 23 continuous, 148 integer (148 binary)
Found heuristic solution: objective 3.0122300
Found heuristic solution: objective 3.0122260

Root relaxation: objective 1.440298e+00, 217 iterations, 0.00 seconds

| Nodes | | Current Node | | Objective Bounds | | Work | |
Expl Unexpl		Obj Depth IntInf		Incumbent BestBd Gap		It/Node Time	
0 0		1.44030 0 30		3.01223 1.44030 52.2%		- 0s	
0 0		2.00523 0 27		3.01223 2.00523 33.4%		- 0s	
H 0 0				3.0102300 2.00523 33.4%		- 0s	
0 0		2.00523 0 25		3.01023 2.00523 33.4%		- 0s	
0 0		2.00639 0 30		3.01023 2.00639 33.3%		- 0s	
H 0 0				3.0092300 2.00639 33.3%		- 0s	
0 0		2.00641 0 34		3.00923 2.00641 33.3%		- 0s	
0 0		2.00675 0 27		3.00923 2.00675 33.3%		- 0s	
0 0		2.00675 0 27		3.00923 2.00675 33.3%		- 0s	
0 2		2.00675 0 27		3.00923 2.00675 33.3%		- 0s	

Cutting planes:
  Learned: 3

<untitled> #21

  Gomory: 2
  Cover: 15
  Clique: 15
  MIR: 9
  Flow cover: 6
  GUB cover: 1
  Zero half: 3
  RLT: 1
  Relax-and-lift: 2

Explored 24 nodes (752 simplex iterations) in 0.23 seconds
Thread count was 4 (of 4 available processors)

Solution count 4: 3.00923 3.01023 3.01223 3.01223

Optimal solution found (tolerance 1.00e-04)
Best objective 3.009230000000e+00, best bound 3.009230000000e+00, gap 0.0000%
<gurobi.Model MIP instance MILP Model: 4131 constrs, 567 vars, No parameter changes>

Solution Results

Time = 0.652289867401123 second
Total number of stations opened from both sides   :   2.0
Total number of stations opened from only one side   :   1.0
Total number of stations opened   :   5.0
MODEL- m1

(m, i)	(j,s)	Processing Time	Starting Time	Ending Time
('m1', 1) :	[(1, 1)]	30	10.0	40.0
('m1', 3) :	[(2, 2)]	12	0.0	12.0
('m1', 6) :	[(2, 1)]	21	19.0	40.0
('m1', 7) :	[(2, 1)]	6	12.0	18.0
('m1', 9) :	[(2, 2)]	25	15.0	40.0
('m1', 10) :	[(3, 2)]	10	0.0	10.0

MODEL- m4

(m, i)	(j,s)	Processing Time	Starting Time	Ending Time
('m4', 1) :	[(1, 1)]	5	0.0	5.0
('m4', 4) :	[(1, 2)]	7	22.0	29.0
('m4', 6) :	[(1, 2)]	11	29.0	40.0
('m4', 9) :	[(1, 2)]	16	5.0	21.0
('m4', 11) :	[(2, 1)]	33	0.0	33.0
('m4', 13) :	[(1, 1)]	6	34.0	40.0
('m4', 17) :	[(3, 2)]	16	0.0	16.0
('m4', 18) :	[(2, 2)]	32	0.0	32.0