

<untitled> #334

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

Warning: your license will expire in 4 days

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Gurobi Optimizer version 9.0.3 build v9.0.3rc0 (win64)
Optimize a model with 8180 rows, 912 columns and 40722 nonzeros
Model fingerprint: 0x2977cc0c
Variable types: 40 continuous, 872 integer (872 binary)
Coefficient statistics:
 Matrix range [1e+00, 1e+05]
 Objective range [1e-06, 1e+00]
 Bounds range [1e+00, 1e+00]
 RHS range [1e+00, 3e+05]
Presolve removed 7718 rows and 717 columns
Presolve time: 0.08s
Presolved: 462 rows, 195 columns, 2903 nonzeros
Variable types: 25 continuous, 170 integer (170 binary)
Found heuristic solution: objective 3.0121900
Found heuristic solution: objective 3.0121890

Root relaxation: objective 1.393224e+00, 261 iterations, 0.01 seconds

Nodes			Current Node			Objective Bounds			Work	
Expl	Unexpl		Obj	Depth	IntInf	Incumbent	BestBd	Gap	It/Node	Time
	0	0	1.39322	0	25	3.01219	1.39322	53.7%	-	0s
H	0	0				3.0101930	1.39322	53.7%	-	0s
	0	0	2.00529	0	55	3.01019	2.00529	33.4%	-	0s
H	0	0				3.0091900	2.00529	33.4%	-	0s
	0	0	2.00529	0	55	3.00919	2.00529	33.4%	-	0s
	0	0	2.00579	0	53	3.00919	2.00579	33.3%	-	0s
	0	0	2.00582	0	50	3.00919	2.00582	33.3%	-	0s
	0	0	2.00603	0	44	3.00919	2.00603	33.3%	-	0s
H	0	0				3.0071900	2.00603	33.3%	-	0s
	0	0	2.00619	0	40	3.00719	2.00619	33.3%	-	0s
	0	0	2.00652	0	42	3.00719	2.00652	33.3%	-	0s
	0	0	2.00652	0	43	3.00719	2.00652	33.3%	-	0s
	0	0	2.00652	0	43	3.00719	2.00652	33.3%	-	0s

<untitled> #334

0	0	2.00652	0	26	3.00719	2.00652	33.3%	-	0s
0	2	2.00652	0	26	3.00719	2.00652	33.3%	-	0s

Cutting planes:

Learned: 1
Cover: 8
Implied bound: 1
Clique: 19
MIR: 5
GUB cover: 1
Mod-K: 1
RLT: 1
Relax-and-lift: 1

Explored 27 nodes (1155 simplex iterations) in 0.34 seconds
Thread count was 4 (of 4 available processors)

Solution count 5: 3.00719 3.00919 3.01019 ... 3.01219

Optimal solution found (tolerance 1.00e-04)

Best objective 3.007190000000e+00, best bound 3.007190000000e+00, gap 0.0000%

<gurobi.Model MIP instance MILP Model: 8180 constrs, 912 vars, No parameter changes>

Solution Results

Time = 1.015937089920044 second

Total number of stations opened from both sides	:	1.0
Total number of stations opened from only one side	:	2.0
Total number of stations opened	:	4.0

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) :	[(3, 1)]	21	10.0	31.0
('m1', 7) :	[(3, 1)]	6	31.0	37.0
('m1', 9) :	[(2, 2)]	25	12.0	37.0
('m1', 10) :	[(3, 1)]	10	0.0	10.0

MODEL- m2

(m, i)	(j,s)	Processing Time	Starting Time	Ending Time
('m2', 1) :	[(1, 2)]	11	0.0	11.0
('m2', 3) :	[(1, 1)]	20	11.0	31.0
('m2', 4) :	[(2, 2)]	14	0.0	14.0
('m2', 5) :	[(2, 2)]	19	14.0	33.0
('m2', 6) :	[(2, 2)]	1	33.0	34.0
('m2', 9) :	[(3, 1)]	6	9.0	15.0
('m2', 17) :	[(2, 2)]	6	34.0	40.0
('m2', 29) :	[(3, 1)]	4	5.0	9.0
('m2', 30) :	[(3, 1)]	5	0.0	5.0