

```
%%%%%%%%%%
%%% problem_1.a.lp
%%%%%%%%%%
```

```
Maximize
  4 Latte + 3 Esp
Subject To
  Acidity: 1 Latte + 3 Esp - Ac = 0
  Coffee: 1 Latte + 1 Esp - Co = 0
  Milk: 2 Latte + 1 Esp - Mi = 0
Bounds
  Ac <= 25
  Co <= 7
  Mi <= 8
End
```

```
%%%%%%%%%%
%%% problem_1.a.sol
%%%%%%%%%%
```

```
# Objective value = 22
Latte 1
Esp 6
Ac 19
Co 7
Mi 8
```

```
%%%%%%%%%%
%%% problem_1.b.lp
%%%%%%%%%%
```

```
Maximize
  4 Latte + 3 Esp
Subject To
  Acidity: 1 Latte + 3 Esp - Ac = 0
  Coffee: 1 Latte + 1 Esp - Co = 0
  Milk: 2 Latte + 1 Esp - Mi = 0
Bounds
  Ac <= 25
  Co <= 7.01
  Mi <= 8
End
```

```
%%%%%%%%%%
%%% problem_1.b.sol
```

%%%%%%%%%

Objective value = 22.02
Latte 9.9000000000000021e-01
Esp 6.02
Ac 1.904999999999997e+01
Co 7.01
Mi 8

%%%%%%%%%
%%% problem_1.c.lp
%%%%%%%%%

Maximize
4 Latte + 3 Esp
Subject To
Acidity: 1 Latte + 3 Esp - Ac = 0
Coffee: 1 Latte + 1 Esp - Co = 0
Milk: 2 Latte + 1 Esp - Mi = 0
Bounds
Ac <= 25
Co <= 6.99
Mi <= 8
End

%%%%%%%%%
%%% problem_1.c.sol
%%%%%%%%%

Objective value = 21.98
Latte 1.009999999999998e+00
Esp 5.98
Ac 1.895000000000003e+01
Co 6.99
Mi 8

%%%%%%%%%
%%% problem_1.d.lp
%%%%%%%%%

Maximize
4 Latte + 3 Esp
Subject To
Acidity: 1 Latte + 3 Esp - Ac = 0
Coffee: 1 Latte + 1 Esp - Co = 0
Milk: 2 Latte + 1 Esp - Mi = 0
Bounds
Ac <= 25.01
Co <= 7
Mi <= 8
End

%%%%%%%%%
%%% problem_1.d.sol

%%%%%%%%%

Objective value = 22

Latte 1

Esp 6

Ac 19

Co 7

Mi 8

%%%%%%%%%

%%% problem_2.lp

%%%%%%%%%

Maximize

4 x1

Subject To

First_Slack: -x1 + s1 = -4

Second_Slack: x1 + s2 = 3

Bounds

\
\ Note that in Gurobi, the default bounds on a continuous variable
\ are that they are ≥ 0 and unbounded from above.

\
End

%%%%%%%%%

%%% problem_2.sol

%%%%%%%%%

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Gurobi Optimizer version 7.5.1 build v7.5.1rc0 (mac64)

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Read LP format model from file problem_2.lp

Reading time = 0.00 seconds

: 2 rows, 3 columns, 4 nonzeros

Optimize a model with 2 rows, 3 columns and 4 nonzeros

Coefficient statistics:

Matrix range [1e+00, 1e+00]

Objective range [4e+00, 4e+00]

Bounds range [0e+00, 0e+00]

RHS range [3e+00, 4e+00]

Presolve removed 0 rows and 2 columns

Presolve time: 0.00s

Solved in 0 iterations and 0.00 seconds

Infeasible or unbounded model

Unable to retrieve attribute 'X'