Operations Research

Homework 3

Due via Moodle or Mailbox on Tuesday, September 22, 2020

1. Reconsider Problem 1 from Homework Set 1: *Minimize*

$$z = 8\,x + 12\,y$$

subject to

$$\begin{aligned} 5\,x + 2\,y &\geq 20\,, \\ 4\,x + 3\,y &\geq 24\,, \\ y &\geq 2\,, \\ x, y &\geq 0\,. \end{aligned}$$

On Homework Set 2 Problem 3, you wrote this problem in standard form.

Now, solve the problem using the simplex method *on paper*.

2. (a) Write a "concrete" Pyomo model to solve the same problem.

   (b) How does the solution change if you ask for maximizing z instead?

   You should submit a printout of your Ipython notebook which shows the model setup and the computed solutions to (a) and (b).