IEOR 169: Problem Set #6

Spring 2022

Due Apr 28 2022 at 2 PM PST

You are encouraged to collaborate with fellow students as you work through the problem set. However, your final submission must be your own work.

If you used any technology to solve a problem (Pyomo, Gurobipy, Excel, AMPL, etc..) make sure to include the relevant details (ipython notebook, pdf of excel set up and solution, pdf of AMPL code and output, etc..). I may request a copy of the original files that you used. A link to a cloud-based file would not be accepted.

Optional problems will not push your grade beyond 100% but it may compensate for your mistakes in the main problem set.

Your solutions must be uploaded on bCourses by the due time. Late submissions without prior approval will not be accepted.

Problem 1 find a valid inequality

Exercise 8.10.1 from the textbook

. . . .

Problem 2 find a cut

Exercise 8.10.2 from the textbook

. . . .

Problem 3 prove validity

Exercise 8.10.3 from the textbook

. . . .

Problem 4   Bender's Master problem

Exercise 12.7.1 from the textbook

. . . .

Problem 5   solve using Bender's algorithm

Exercise 12.7.2 from the textbook

. . . .

Problem 6   show validity (optional)

Exercise 8.10.7 from the textbook

. . . .