

VG441 HOMEWORK 3

You are encouraged to type your answer using LaTeX, but scanning document is acceptable. The due date of the homework is on Canvas. You can drop one lowest grade in the final evaluation.

Problem 1

Formulate the set cover problem as a mixed integer linear program (MILP). Define decision variables, objective, and constraints clearly. Solve the problem on Page 4 of LEC015 using Gurobi. **(20 pt)**

Problem 2

Prove that the greedy rule is optimal for the Fractional Knapsack Problem. **(20 pt)**