



Applications of Operations Research

Question 1

Pizza delivery to all customers between time frames = vehicle routing problem with time constraints, 1 vehicle

question 2

Lagrangian relaxation. How to solve the problem. Does it decompose?

Question 3

Column generation

Question 4

Initial feasible solution given

- a) Provide a local search move
- b) Based on your proposed local search move, do simulated annealing (no calculator needed, all necessary numbers were given)

Question 5

multiple 0/1 knapsack and greedy heuristic given

Provide an instance that follows this greedy heuristic, but is not optimal

Prove performance guarantee of 2