

Reading assignment: Nemhauser & Wolsey, p349-367, 383-392.

1. Prove Proposition 2.1. NW pp.389
2. NW #3, pp.256
3. NW #11, pp.257
4. Consider the constraint set of a 0-1 knapsack problem $\sum_{j \in N} a_j x_j \leq b, x \in B^n$. Let C be a minimal dependent set and $E(C) = C \cup \{j \in N: a_j \geq \max_{i \in C} a_i\}$. Show that $\sum_{j \in E(C)} x_j \leq |C| - 1$ is a rank 1 C-G inequality, or is dominated by a rank 1 C-G inequality.