

Homework 8

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1. 9.1 HW (Knapsack decision problem NP-complete)

(a) Input: value parameter $M > 0$, list of values $[v_1, \dots, v_n]$, list of weights $[w_1, \dots, w_n]$, weight limit W .

Question: is there a subset $S \subseteq \{1, \dots, n\}$ s.t. $\sum_{k \in S} v_k \geq M$ and $\sum_{k \in S} w_k \leq W$.