Algorithm Design

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Solution of Exercise R-5.12

This is a knapsack problem, where the weight of the sack is n, and each bid i corresponds to an item of weight k_i and value d_i. If each bidder i is unwilling to accept fewer than k_i widgets, then this is a 0/1 problem. If bidders are willing to accept partial lots, on the other hand, then this is a fractional version of the knapsack problem.