

Valid inequalities, cutting planes and integrality of the knapsack polytope

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Abstract

In this paper we consider knapsack problem and knapsack polytope. Some important concepts and preliminaries are given at the beginning. Results connected with generation of valid and dominating inequalities (including the modular arithmetic approach), cutting planes, and integrality of the knapsack polytope are presented.

Keywords: *Combinatorial optimization, integer programming, knapsack problem, valid inequalities, dominating inequalities, cutting planes, integrality of polytopes.*

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