

# 단체법에서의 초기기저 설정에 관한 연구<sup>†</sup>

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A Study on setting a good Initial Basis in the Simplex Method

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## Abstract

Setting an initial basis is an important process in the simplex method. It greatly affects the number of iterations and the execution time taken to find an optimal solution. This paper deals with how to set a good initial basis.

To maintain the linear independency among the basic columns, enhanced Gaussian elimination method and a method using non-duplicated nonzero elements are developed. For the preference order of the structural variables, an order based on the sparsity of the structural column is developed.

Experimental results show that the method using non-duplicated nonzero elements along with the order based on the sparsity of the structural columns can reduce the number of iterations and the execution time compared with Bixby's method.

Keywords : simplex method, initial basis, linear independency, preference order for structural variables

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