

## On Ranking of Feasible Solutions of a Bottleneck Linear Programming Problem

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### Abstract

An algorithm for the ranking of the feasible solutions of a bottleneck linear programming problem in ascending order of values of a concave bottleneck objective function is developed in this paper. The "best" feasible solution for a given value of the bottleneck objective is obtained at each stage. It is established that only the extreme points of a convex polytope need to be examined for the proposed ranking. Another algorithm, involving partitioning of the nodes, to rank the feasible solutions of the bottleneck linear programming problem is proposed, and numerical illustrations for both are provided.

**Key Words:** Bottleneck, Min-Max, Non-Convex Programming, Extreme-Point Ranking.