Solving triangular fuzzy transportation problems with the quadratic mean

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Abstract: In the history of operations research, transportation problems have been one of the most exciting and demanding subjects. Many researchers have concentrated on solving the problem in various ways. In this study, we came up with a ranking method based on triangular fuzzy numbers, where transportation norms such as demand, supply, and transportation cost are triangular fuzzy numbers. The majority of existing techniques only provide crisp solutions to the problem of fuzzy transportation. Many researchers have concentrated on finding solutions to the problem through various methods. The ranking method is commonly used in studies to convert a fuzzy number into a crisp number. These methods have benefits and drawbacks. Additionally, this strategy requires the fewest iterations to reach optimality when compared to other existing methods. In this research work, we suggest an alternate approach for using the quadratic mean to identify the near best solution to the transportation problem.

Keywords: Ranking method, Triangular fuzzy numbers, Optimal solution