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NEUTROSOPHIC LINEAR FRACTIONAL PROGRAMMING PROBLEM USING DENOMINATOR OBJECTIVE RESTRICTION METHOD

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Abstract. Consistency significantly impacts the logical cohesiveness of preference information and holds sway over the eventual decision outcomes. This study introduces two innovative definitions tailored specifically for neutrosophic fuzzy fractional programming. This framework is particularly relevant when the sole neutrosophic aspect lies in the right-hand side, aimed at uncovering optimal solutions within the landscape of neutrosophic fuzzy scenarios.To empirically validate these novel concepts, a series of linear programming models is formulated. These methodologies are meticulously designed to encompass the complete spectrum of insights provided by decision makers while preserving the inherent length of neutrosophic fuzzy numbers. Furthermore, a technique is proposed to rectify inconsistencies within neutrosophic fuzzy fractional programming, converting them into consistent formulations where the neutrosophic nature of the right-hand side is preserved with minimal deviation from the original issue.Subsequently, linear programming models are devised to assign priority within neutroshopic Fuzzy numbers . Building upon these models, an integrated algorithm is crafted to comprehensively illustrate the process, encompassing consistency testing, inconsistency rectification, and the derivation for neutrosophic fuzzy numbers. Moreover, these methodologies are extended to address the complexities posed by incomplete neutrosophic fuzzy fractional programming, particularly within the context of half neutrosophic fractional programming.To underscore the practical viability and efficacy of the proposed approach, two numerical instances are presented alongside an exhaustive comparative analysis. These instances serve to underscore the method's practicality and its potential to yield substantive insights.

Keywords. Triangular neutrosophic numbers, Denominator Objecive Restriction Method, Ranking function,Linear fractional programming,Optimal solution.

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