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Cauchy sequence in fuzzy bi-normed linear spaces

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Abstract

In this paper we introduce the notion of fuzzy point and Cauchy sequence in fuzzy bi-normed linear space and some basic results related to these notions. Certain results in connection with the a fuzzy bi-normed convergence, Cauchy sequence are also analyzed.

Keywords: Fuzzy point, Bi-norm, Convergence, Cauchy Sequence, Complete.

1. Introduction

The concept of fuzzy set was introduced by Zadeh [7] in 1965. A. White [6] introduced the 2-Banach Space A. White, A.K. Katsaras [5] introduced the Fuzzy topological vector spaces. Meenakshi A.R. and Cokilavany [3] introduced the concept of fuzzy 2-normed linear spaces. Nagoorgani A. and Kalyani G. [4] introduced the Bi-normed sequences in fuzzy matrices. B. Dinda and T. K. Samanta and U.K. Bera [2] introduced the On fuzzy 2-metric space, Cokilavany. D. The organization of the paper is as follows: Section 2. provides some preliminary results which are used in this paper. In section 3, we have discussed convergence and F- Cauchy