

ON A CLASS OF DIFFERENCE SEQUENCES OF MULTISET REAL NUMBER RELATED TO ℓ_p -SPACE

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In this article we introduce $m(\phi, n, \Delta)$, the class of differences sequences of multiset real numbers relating to ℓ_p -space ($p \geq 1$). We have studied its different properties like linearity, completeness, solidity, symmetry, convexity, convergence free, sequence algebra etc. We have investigated its different properties. Also we have obtained some inclusion results involving this sequence space.

1. Introduction

In order to give importance to the repetitions of elements in a set, the concept of multiset was introduced. At the initial stage it was introduced by R. Dedekind in 1888 and for the first time systematically studied by Blizard [1] in 1989.

A multiset is a collection of objects (called elements) in which objects may occur more than once. The number of times of an element occurs in a multiset is called its multiplicity. The cardinality of a multiset is the sum of multiplicities of its elements. The multiset theory which contains set theory as a special case was introduced by Cerf et al. [3] in 1971. For the sake of convenience, a multiset is written as $\{x_1/k_1, x_2/k_2, x_3/k_3, \dots, x_n/k_n, \dots\}$ in which the element x_i occurs k_i times for $i = 1$ to ∞ . We observe that each multiplicity k_i is a positive integer.

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