



Arithmetic and Measure Theory

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Abstract

In this paper we introduce so called “standard sequences” of natural numbers i.e. the sequences $p = (p_n)_n$ of increasing numbers such that for any $k \in \mathbb{N}^*$ we have:

$$\sum_{i>k} \frac{1}{p_i} \leq \frac{1}{p_k(p_k - 1)}, \quad p_1 \geq 2.$$

The set S of all such kind of sequences endowed with anti-lexicographic order becomes isomorphic with the unit interval $(0, 1]$.

Then we consider a special order interval in S and we use them in proving the analyticity with respect to a given family of subsets of an arbitrary non-empty set.