Shapiro, L. B.

On Baire isomorphisms of spaces of uncountable weight. (English. Russian original)

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For a completely regular space X let $B_0(X)$ denote the σ- algebra of Baire subsets of X. A space X is called an absolute Baire space if $X \in B_0(\beta X)$. A mapping $f : X \to Y$ is said to be B_0-measurable if $f^{-1}(B_0(Y)) \subset B_0(X)$. A one-to- one mapping $f : X \to Y$ of a space X onto a space Y is called a Baire isomorphism (briefly, a B_0-isomorphism) if f and f^{-1} are B_0-measurable mappings. We study the question of existence of a Baire isomorphism between Tikhonov cubes, on the one hand, and subsets of Dugundji and κ-metrizable compact Hausdorff spaces, on the other hand. The following theorem is the main result: Theorem. If X is homogeneous with respect to character and is a Baire subset of Dugundji space, then it is Baire isomorphic to $I^{\omega(X)}$. Corollary. A Dugundji space of weight τ that is homogeneous with respect to character is Baire isomorphic to I^τ.

MSC:

54C50 Topology of special sets defined by functions
54A25 Cardinality properties (cardinal functions and inequalities, discrete subsets)
54E52 Baire category, Baire spaces

Keywords:

absolute Baire space; Baire isomorphism; B_0-measurable mappings; Tikhonov cubes; κ-metrizable compact Hausdorff spaces; character; Dugundji space; weight