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Sequentially Right Banach spaces of order p

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Abstract: We introduce and study two new classes of Banach spaces, the so-called sequentially Right Banach spaces of order p , and those defined by the dual property, the sequentially Right* Banach spaces of order p for $1 \leq p \leq \infty$. These classes of Banach spaces are characterized by the notions of L_p -limited sets in the corresponding dual space and R_p^* subsets of the involved Banach space, respectively. In particular, we investigate whether the injective tensor product of a Banach space X and a reflexive Banach space Y has the sequentially Right property of order p when X enjoys this property.

Keywords: Right topology; sequentially Right Banach space; pseudo weakly compact operator; Pelczyński's property (V) of order p ; limited p -converging operator; p -Gelfand–Phillips property; reciprocal Dunford–Pettis property of order p

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