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A CHARACTERIZATION OF B -CONVEXITY AND J -CONVEXITY OF BANACH SPACES

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This paper is dedicated to Professor Themistocles M. Rassias.

Submitted by M. Abel

ABSTRACT. In [K.-I. Mitani and K.-S. Saito, J. Math. Anal. Appl. 327 (2007), 898–907] we characterized the strict convexity, uniform convexity and uniform non-squareness of Banach spaces using ψ -direct sums of two Banach spaces, where ψ is a continuous convex function with some appropriate conditions on $[0, 1]$. In this paper, we characterize the B_n -convexity and J_n -convexity of Banach spaces using ψ -direct sums of n Banach spaces, where ψ is a continuous convex function with some appropriate conditions on a certain convex subset of \mathbb{R}^n .

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