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**Title:** Mazur's type problem for convexity of higher orders

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I. LABUDA and R. D. MAULDIN [4] have solved in affirmative the following S. MAZUR's problem posed about 1935 (see [6]):

*“In a space  $E$  of type  $(B)$ , there is given an additive functional  $F(x)$  with the following property: if  $x(t)$  is a continuous function in  $0 \leq t \leq 1$  with values in  $E$ , then  $F(x(t))$  is a measurable function. Is  $F(x)$  continuous?”*

In [1], we showed that the same remains true in the case where  $F$  is a Jensen-convex functional on an open and convex subdomain of a real Banach space. In the present paper, we study the possibilities of an extension of this result to convexity of higher orders.

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