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Vladyslav Yaskin* (vladyaskin@math.ualberta.ca), Department of Math. & Stat. Sciences,
University of Alberta, Edmonton, Alberta T6G 2G1, Canada. *On embeddings of normed spaces in*
 L_{-k} .

The notion of embedding of a normed space in L_{-k} was introduced by A. Koldobsky. It is an open question whether a space $(\mathbb{R}^n, \|\cdot\|)$ that embeds in L_{-k} necessarily embeds in L_{-m} for $0 < k < m < n - 3$. We solve a related problem. We show that there is a normed space $(\mathbb{R}^n, \|\cdot\|)$ that embeds in L_{-m} but not in L_{-k} . (Received September 16, 2008)