Dedicated to Professor Ioan A. RUS on the occasion of his 70th anniversary

On the asymptotic behaviour of the number of maximum points of a simple random walk

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ABSTRACT. For a sequence $(X_i)_{i\geq 1}$ of independent and identically distributed random variables, taking the values -1, 0 and 1, we define $S_0 = 0$ and $S_k = \sum_{i=1}^{k} X_i$, for $k \geq 1$. We study the asymptotic behaviour of the sequence of random variables $(Q_n)_{n\geq 1}$, where Q_n indicates the number of absolute maximum points of the simple random walk $S_0, S_1, \cdots, S_n$. The paper extends some results of Dwass [2], Révész [11], Katzenbeisser and Panny [7], [8].

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