Year: 2013 **Vol.: 82** **Fasc.: 1**

Title: On the counting function of Stanley sequences

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For a finite sequence $A = \{a_1 < a_2 < \cdots < a_t\}$ of nonnegative integers which contains no 3-term arithmetic progression, the Stanley sequence S generated by A is defined as follows: for $k \geq t$, a_{k+1} is the least integer $a > a_k$ such that $\{a_1, a_2, \ldots, a_k, a\}$ contains no 3-term arithmetic progression. Recently, Moy proved that $\liminf S(x)/\sqrt{x} \geq \sqrt{2}$, which solves a problem posed by Erdős et al., where $S(x)$ is the counting function of S. In this note we show that $\limsup S(x)/\sqrt{x} \geq 1.77$.

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