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Title: On the monotonicity of an additive representation function

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Let $\mathcal{A} = \{a_1, a_2, \dots\}$ $(a_1 < a_2 < \dots)$ be an infinite sequence of positive integers, and let $k \geq 2$ be a fixed integer. Let $r_1(\mathcal{A}, n, k)$ denote the number of solutions of $a_{i_1} + a_{i_2} + \cdots + a_{i_k} = n$, $a_{i_1} \in \mathcal{A}, \dots, a_{i_k} \in \mathcal{A}$. For $k = 2$, P. Erdős, A. Sárközy and V. T. Sós studied the monotonicity of $r_1(\mathcal{A}, n, k)$. In this paper I extend one of their results to any $k > 2$.

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