

Problem 6 (due Monday, April 24)

Non-negative integers d_i , $i \in \mathbb{Z}$, satisfy the following condition: $[d_k = \sum_{i=k}^{\infty} d_{i+1}]$ for every integer k . Prove that there is a positive integer n such that $[d_k \in \{n-1, n\}] \wedge d_{k+n} = d_k$ for every integer k .

Only one solution was submitted, by Prof. Vladislav Kargin. His solution is different from our original solution. For details see the following link [Solution](#).

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