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*On the Euler Function of Linearly Recurrence Sequences*,  
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**Abstract**

In this paper, we show that if  $(U_n)_{n \geq 1}$  is any nondegenerate linearly recurrent sequence of integers whose general term is up to sign not a polynomial in  $n$ , then the inequality  $\phi(|U_n|) \geq |U_{\phi(n)}|$  holds on a set of positive integers  $n$  of density 1, where  $\phi$  is the Euler function. We show that the set of  $n \leq x$  for which the above inequality fails has counting function  $O_U(x/\log x)$ .