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 ϕ is the Euler function. We show that the set of $n \leq x$ for which the above inequality fails has counting function $O_U(x/\log x)$.