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L-functions of elliptic curves and Fibonacci numbers,
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Abstract

Let $L(s, E) = \sum_{n \geq 1} a_n n^{-s}$ be the L -series corresponding to an elliptic curve E defined over \mathbb{Q} . We prove that if E is non-CM and has non-trivial 2-torsion, then the set of positive integers n such that $|a_n|$ is a Fibonacci number has asymptotic density 0.