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Lucas Pseudoprimes of Special Types,
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Abstract

Rotkiewicz has shown that there exist Fibonacci pseudoprimes having the forms $p(p+2)$, $p(2p-1)$, and $p(2p+3)$, where all the terms in the products are odd primes. Assuming Dickson's conjecture on prime k-tuples, we generalize this result by finding an infinite class of Lucas sequences, each having infinitely many Lucas pseudoprimes of the five types: $p(p+2)$, $p(2p-3)$, $p(2p-1)$, $p(2p+1)$, and $p(2p+3)$.