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A tribonacci-like sequence of composite numbers,

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Abstract

We find three positive integers x_0, x_1, x_2 satisfying $\gcd(x_0, x_1, x_2) = 1$ such that the tribonacci-like sequence $(x_n)_{n=0}^{\infty}$ given by $x_{n+1} = x_n + x_{n-1} + x_{n-2}$ for $n \geq 2$ consists of composite numbers only. The initial values are $x_0 = 99202581681909167232$, $x_1 = 67600144946390082339$, $x_2 = 139344212815127987596$. This is a natural extension of a similar result of Graham for the Fibonacci-like sequence.