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On a class of relatively prime sequences. (In English)

J. Number Theory 10, 451-474 (1978). [0022-314X]

For each $n \geq 1$ let $a_0(1) = n$ and define $a_{i+1}(n) > a_i(n)$ inductively as the least integer coprime to $a_j(n)$ for $0 \leq j \leq i$. Let $g(n)$ be the largest $a_i(n)$ which is neither a prime n or the square of a prime. It is shown here that $g(n) \sim n$ and that $g(n) - n \gg m^{1/2} \log n$. The true order of magnitude of $g(n) - n$ remains unsettled, and some relevant computations are discussed. Other results on the sequence $a_i(n)$ are given, extending work of *P.Erdős* [Math. Mag. 51, 238-240 (1978; Zbl 391.10004)] . The following result occurs incidentally in one of the proofs: if n is large enough $[n/p]$ is composite for some prime $p < n^{1/2}$.

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