
Zbl 228.10033

Erdős, Paul; Subbarao, M.V.

On the iterates of some arithmetic functions. (In English)

Theory arithmetic Functions, Proc. Conf. Western Michigan Univ. 1971, Lecture Notes Math. 251, 119-125 (1972).

[For the entire collection see Zbl 226.10001.]

Denote by $\sigma(n)$ the sum of the divisors of n and by $\sigma^*(n) = \prod_{p^\alpha | n}(p^\alpha + 1)$. The authors prove that for almost all n $\sigma(\sigma(n))/n \to \infty$ but for almost all n $\sigma^*(\sigma^*(n))/n$ remains bounded in fact $\sigma^*(\sigma^*(n)) = (1 + 0(1))\sigma^*(n)$. Several related results are proved and some unsolved problems are stated.

Classification:

11N37 Asymptotic results on arithmetic functions

11A25 Arithmetic functions, etc.