
Zbl 061.07907

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On some asymptotic formulas in the theory of the 'factorisatio numerorum'. (In English)

Ann. of Math., II. Ser. 42, 989-993 (1941); corrctions ibid. 44, 647-651 (1943).

Let $1 < a_1 < a_2 < \cdots$ be a sequence of integers such that, for some σ, $\sum_{k=1}^{\infty} a_k^{-\rho} = 1$ and $\sum_{k=1}^{\infty} \log a_k < \infty$, but not all a_k are powers of a_1. If l is a nonnegative integer and n is a positive integer, let $T_l(n)$ be the coefficient of n in the Dirichlet series for $\left(\sum_{k=1}^{\infty} a_k^{-\rho}\right)^l$. Write $f(n) = \sum_{l=0}^{\infty} T_l(n)$. It is proved in an elementary way that $n^{-\rho} \sum_{m=1}^{n} f(m)$ has a positive limit as $n \to \infty$.

Classification:
11N37 Asymptotic results on arithmetic functions