
Zbl 217.32202**Erdős, Paul; Turán, P.***On some general problems in the theory of partitions. I* (In English)**Acta Arith.** **18**, 53-62 (1971). [0065-1036]Let $0 < \lambda_1 < \lambda_2 < \dots$ be an infinite sequence. Assume

$$\lim_{x \rightarrow \infty} \left(\sum_{\lambda_i < x} 1 \right) X^{-\alpha} (\log x)^\beta = A.$$

Then for almost all systems $\lambda_{i_1} + \lambda_{i_2} + \dots \leq N$, $1 \leq i_1 < i_2 < \dots$ the number of summands is

$$(1 + o(1))c_1 N^{\alpha/(\alpha+1)} (\log N)^{-\beta/(\alpha+1)}, \quad c_1 = c_1(\alpha, \beta, A).$$

Several related results are proved. [See the first author and *J. Lehner*, *Duke Math J.* **8**, 335-345 (1941; Zbl 025.10703) and the authors, *Acta Math. Acad. Sci. Hung.* **19**, 413-435 (1963; Zbl 235.20004).]

Classification:

11P81 Elementary theory of partitions

11P82 Analytic theory of partitions