

Zbl 061.07906

Erdős, Paul

*On some asymptotic formulas in the theory of partitions.* (In English)

**Bull. Am. Math. Soc.** **52**, 185-188 (1946).

Let  $p(n)$  be the number of partitions of the positive integer  $n$  and let  $p_k(n)$  be the number of partitions of  $n$  into exactly  $k$  summands. The author proves that

$$k_0(n) = \pi^{-1}(3/2)^{1/2}n^{1/2} \log n + cn^{1/2} + o(n^{1/2}),$$

where  $c$  is a constant and  $k_0(n)$  is the value of  $k$  for which  $p_k(n)$  is largest. Sharper results on  $k_0(n)$  were subsequently obtained by *G.Szekeres* (Zbl 042.04102).

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Classification:

11P81 Elementary theory of partitions

11P82 Analytic theory of partitions