Let $R(n)$ and $R'(n)$ denote the number of partitions of n into summands and distinct summands respectively that are relatively prime to n. *P.Erdős* has shown [Ann. of Math., II. Ser. 43, 437-450 (1942; Zbl 061.07905)] that

$$\log R(n) \sim \pi\sqrt{2/3}\varphi^{1/2}(n), \quad \log R'(n) \sim \pi\sqrt{2/3}\varphi^{1/2}(n)$$

where $\varphi(n)$ denotes Euler's function. This paper obtains more explicit and precise results by applying the results of K. *F.Roth* and *G.Szekeres* [Quart. J. Math., Oxford II. Ser. 5, 241-259 (1954; Zbl 057.03902)] than obtained by *B.Richmond* [J. Number Theory 9, 525-534 (1977; Zbl 363.10032)].

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