



## Ramanujan's lost notebook.

Andrews, George E. (1938-)

**Electronic books** **Biography**

Monografía

"In the spring of 1976, George Andrews of Pennsylvania State University visited the library at Trinity College, Cambridge, to examine the papers of the late G.N. Watson. Among these papers, Andrews discovered a sheaf of 138 pages in the handwriting of Srinivasa Ramanujan. This manuscript was soon designated, "Ramanujan's lost notebook." Its discovery has frequently been deemed the mathematical equivalent of finding Beethoven's tenth symphony. This volume is the fourth of five volumes that the authors plan to write on Ramanujan's lost notebook. In contrast to the first three books on Ramanujan's Lost Notebook, the fourth book does not focus on q-series. Most of the entries examined in this volume fall under the purviews of number theory and classical analysis. Several incomplete manuscripts of Ramanujan published by Narosa with the lost notebook are discussed. Three of the partial manuscripts are on diophantine approximation, and others are in classical Fourier analysis and prime number theory. Most of the entries in number theory fall under the umbrella of classical analytic number theory. Perhaps the most intriguing entries are connected with the classical, unsolved circle and divisor problems."--Publisher's description

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**Contenido:** 1. Introduction -- 2. Double series of Bessel functions and the circle and divisor problems -- 3. Koshliakov's formula and Guinand's formula -- 4. Theorems featuring the gamma function -- 5. Hypergeometric series -- 6. Two partial manuscripts on Euler's constant  $\gamma$  -- 7. Problems in diophantine approximation -- 8. Number theory -- 9. Divisor sums -- 10. Identities related to the Riemann zeta function and periodic zeta functions -- 11. Two partial unpublished manuscripts on sums involving primes -- 12. An unpublished manuscript of Ramanujan on infinite series identities -- 13. A partial manuscript on Fourier and Laplace transforms -- 14. Integral analogues of theta functions and Gauss sums -- 15. Functional equations for products of Mellin transforms -- 16. A preliminary version of Ramanujan's paper "On the product [mathematical equation]" -- 17. A preliminary version of Ramanujan's paper "On the integral [mathematical equation]" -- 18. A partial manuscript connected with

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### Baratz Innovación Documental

- Gran Vía, 59 28013 Madrid
- (+34) 91 456 03 60
- [informa@baratz.es](mailto:informa@baratz.es)