

**ZMATH 2004a.00001**

**Finch, Steven R.**

**Mathematical constants.**

Cambridge University Press, Cambridge (ISBN 0-521-81805-2). 616 p. (2003).

The author provides 136 essays, each devoted to a mathematical constant or a class of constants, from the well known to the highly exotic. Topics covered include the statistics of continued fractions, chaos in non-linear systems, prime numbers, sum-free sets, isoperimetric problems, approximation theory, self-avoiding walks and the Ising model (from statistical physics), binary and digital search trees (from theoretical computer science), the Prouhet-Thue-Morse sequence, complex analysis, geometric probability, and the traveling salesman problem. This book will be helpful both to readers seeking information about a specific constant and to readers who desire a panoramic view of all constants coming from a particular field, for example, combinatorial enumeration or geometric optimization. Unsolved problems appear virtually everywhere as well. (Publisher's description)

*Classification:* A10

*Keywords:* unsolved problems