19[2.30, 7].—W. A. BEYER & M. S. WATERMAN, *Decimals and Partial Quotients of Euler's Constant and* ln 2, ms. of 28 computer sheets deposited in the UMT file.

Herein are tabulated Euler's constant γ and ln 2 to 7114D and 7121D, respectively, as well as the first 6922 and 6890 partial quotients of the corresponding simple continued fractions. Details of the calculations are presented in a paper [1] by the same authors in this issue.

It may be of interest to record here that in the first 6922 partial quotients for γ a total of nine exceed 1000; namely, $a_{528} = 2076$, $a_{1245} = 1168$, $a_{1273} = 1672$, $a_{1553} = 1925$, $a_{2286} = 1012$, $a_{3079} = 1002$, $a_{3751} = 1095$, $a_{4802} = 2254$, and $a_{5428} = 4351$. This count is in excellent agreement with the Gauss-Kuzmin law, which predicts for almost all real numbers a count of 10 such quotients for this sample size. On the other hand, of the first 6890 partial quotients for ln 2 only six exceed 1000; namely, $a_{501} = 3377$, $a_{1271} = 2745$, $a_{3137} = 1247$, $a_{3915} = 2158$, $a_{5262} = 2765$, and $a_{6803} = 1350$.

In [1] the authors tabulate the individual relative frequencies of those partial quotients among the first 3470 for γ that do not exceed 10 in magnitude.

J. W. W.

1. W. A. BEYER & M. S. WATERMAN, "Error analysis of a computation of Euler's constant," *Math. Comp.*, v. 28, 1974, pp. 599–604.

20[2.60].—RAYMOND E. MILLER & JAMES W. THATCHER, Editors, *Complexity of Computer Computations*, Plenum Publishing Corporation, New York, 1972, 225 pp., 25 cm. Price $16.50.

This book is the proceedings of a symposium held at the IBM Thomas J. Watson Research Center in March 1972. It contains the fourteen presented papers plus an account of the panel discussion session. There was considerable attention given in the panel discussion to the field of the symposium. There was no agreement on a suitable name although "computational complexity", "computability", "theory of algorithms" and "concrete computational complexity" were suggested. Neither was there good agreement on the content of the field, but the symposium (and this book) itself serve admirably to delineate the field. That is, the content of this field (whatever it is called) is that which the people in the field are doing.

There are two branches to the field, one numerical and the other combinatorial in nature. Space precludes presenting a review of each of the fourteen papers, but, since the nature of this field is a prime question at this time, a very short description is given for each paper. The order is that of the book.

NUMERICAL COMPUTATIONS

1. V. STRASSEN. Analysis of the number of arithmetic operations required to evaluate a rational function.

2. M. O. RUBIN. Analysis of the effort to solve a system of n linear equations using only scalar product computations. At least $n(n + 1)/2 - 1$ inner products must be used.

3. E. M. REINGOLD & A. I. STOCKS. New and more elementary proofs of the lower bounds on the number of arithmetic operations required to evaluate a polynomial.