

Chapters I through V, IX and X could be the core of an advanced, one-semester course in matrix theory including elementary group representation theory. Selected topics from the remaining chapters could more than easily complete a one-year sequence.

This reviewer believes that *Integral Matrices* will certainly take its place among the very best in mathematical expositions: it deals with interesting material; it is packed with information; and it is intelligible.

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6 [7, 9].—ROBERT SPIRA, *Table of $e^{\pi\sqrt{n}}$* , Michigan State University, East Lansing, Michigan. Ms. of 9 typewritten pp. deposited in the UMT file.

This unpublished table consists of 15D values of $e^{\pi\sqrt{n}}$ for $n = 1(1)200$. Because of the increasing size of the integer parts of these numbers, the corresponding number of significant figures in the tabular entries ranges from 17 to 35. In the introduction we are informed that this table was calculated in order to test the author's general multiple-precision Fortran subroutines for the elementary functions. Each entry was computed in about four seconds on a CDC 3600 system, using 117S decimal arithmetic.

The author refers to a listing of decimal approximations to six of these numbers in the FMRC *Index* [1], and he notes his confirmation of terminal-digit errors in two of them, originally announced by Larsen [2].

This table should be of particular interest to number-theorists because of the known relation between the fractional part of $e^{\pi\sqrt{n}}$ and the number of classes of binary quadratic forms of determinant equal to $-n$, as mentioned by D. H. Lehmer [3].

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1. A. FLETCHER, J. C. P. MILLER, L. ROSENHEAD & L. J. COMRIE, *An Index of Mathematical Tables*, 2nd ed., Addison-Wesley Publishing Co., Reading, Massachusetts, 1962.
2. *Math Comp.*, v. 25, 1971, p. 200, MTE 474.
3. *MTAC*, v. 1, 1943, pp. 30–31, QR 1.

7 [9].—R. P. BRENT, *The Distribution of Prime Gaps in Intervals up to 10^{16}* , Australian National University, 1973, iv + 62 pp. deposited in the UMT file.

These tables are analogous to the Table 2 of Brent's paper [1]. For all primes p such that $N < p < N'$, the number of gaps

$$p_{i+1} - p_i = g$$

are tabulated for each $g = 2, 4, 6, \dots$ that occurs in (N, N') . The *estimated* total