2. L. J. COMRIE, editor, *Barlow's Tables*, 4th edition, Chemical Publishing Co., New York, 1941.

3. DANIEL SHANKS & JOHN W. WRENCH, JR. "Calculation of π to 100,000 Decimals," *Math. Comp.*, v. 16, 1962, p. 76–99.

4. WILLIAM SHANKS, *Contributions to Mathematics, comprising chiefly the Rectification of the Circle to 607 places of decimals*, G. Bell, London, 1853.

69[A, B].—C. B. BAILEY & G. E. REIS, *Tables of Roots of the First Ten Thousand Integers*, Sandia Corporation Monograph, SCR-501, January 1963, 237 p., 28 cm. Price $3.00. Available from the Office of Technical Services, Department of Commerce, Washington 25, D. C.

Table I lists $N^{1/2}$, $(10N)^{1/2}$, $N^{1/3}$, $(10N)^{1/3}$, $(100N)^{1/3}$, $N^{1/4,}$ $(10N)^{1/4}$, $(100N)^{1/4}$, and $(1000N)^{1/4}$ for $N = 1(1)$ 10,000 to 9D.

Table II lists $N^{1/k}$ for $k = 2(1)$ 10 and $N = 1(1)1000$ to 9D.

Table III lists $x^{1/k}$ for $k = 2(1)10$ to 11D for 48 values of x such as π, π^{-1}, e, γ, $\pi^{1/e}$, $e^{1/\pi}$, etc. In striving for symmetrical completeness, $x = \log_e 10$ and $x = (\log_{10} e)^{-1}$ are both given. Luckily, the values in these two lists coincide.

The tables were computed on a CDC 1604 with a double-precision Newton-Raphson iteration, starting from a single-precision Fortran approximation. All values were carefully rounded (in decimal). The values listed were very carefully checked in two different ways. The format is very good.

The authors are to be commended for their conscientious effort. We have seen so many machine-made tables in the past years with poor error control, mediocre format, etc., that a carefully produced table draws attention to itself at once, as the sort of thing possible if the necessary care is taken.

D. S.

70[A–E, J, M].—ROBERT D. CARMICHAEL & EDWIN R. SMITH, *Mathematical Tables and Formulas*, Dover Publications, Inc., New York, 1962, viii + 269 p., 21.5 cm. Price $1.00.

As explicitly stated by the publisher, this is an unabridged, unaltered, paperback edition of mathematical tables and formulas compiled by Carmichael & Smith and originally published by Ginn and Company in 1931.

The material is arranged in three parts. Part I consists of an introduction devoted to linear interpolation, the elementary properties of logarithms, and a brief description of some of the fourteen tables therein, which are "necessary in the study of college algebra and trigonometry." These tables include: common logarithms to 5D, arranged in a single-entry table; natural and logarithmic trigonometric functions to 4 and 5D; conversion tables for use with sexagesimal and radian angular measurement; and well-known constants, generally to 7 and 8D, except for π and e and their logarithms, which are separately listed to 30D.

Part II consists of five tables "not generally accessible to students of college mathematics," together with brief introductory explanations of their contents and use. These tables include: 6S values of n^{-1}, n^2, n^3, $n^{1/2}$, $(10n)^{1/2}$, $n^{1/3}$, $(10n)^{1/3}$, $(100n)^{1/3}$ for $n = 1(0.01)10$; $\ln n$ to 5D for $n = 0.01(0.01)10(0.1)100(1)1000$; $e^{\pm x}$, $\sinh x$, $\cosh x$, generally to 5S, and their common logarithms to 5D, for $x = 0(0.01)3(0.05)$-$4(0.1)6(0.25)10$; the first 100 multiples of M and $1/M$ to 6D; and finally 10D common logarithms of primes less than 1000.