lished to date. Examples of earlier, less extensive tables are those by Chappell [1] and by Boll [2].

J. W. W.

1. E. CHAPPELL, *Five-Figure Mathematical Tables*, Chambers, London, 1915. (See *MTAC*, v. 1, 1943–1945, p. 131, Q **4.**)
2. M. BOLL, *Tables Numériques Universelles des Laboratoires et Bureaux d'Études*, Dunod, Paris, 1947. (See *MTAC*, v. 2, 1946–1947, pp. 336–338, RMT **428.**)

3[B-E, K, S].—J. C. P. MILLER & F. C. POWELL, *The Cambridge Elementary Mathematical Tables*, Cambridge University Press, Cambridge, 1965, 47 pp., 25 cm. Price $0.50 (paperbound).

The title page carries the information that these four-figure tables were compiled and arranged for the Cambridge Local Examinations Syndicate.

Herein we find conveniently arranged 4D (or 4S) tables of common logarithms and antilogarithms, natural and logarithmic values of trigonometric functions (at intervals of 0°.1), powers (reciprocals, squares, cubes, square roots, cube roots), factorials, natural logarithms, exponential and hyperbolic functions, trigonometric functions for angles in radians, conversion tables (radians to degrees and conversely), binomial coefficients (exact values to $n = 20$), normal distribution function and related statistical functions. Also included are conversion tables for weights and measures and for electromagnetic quantities, and an extensive list of physical constants.

All the mathematical tables are supplied with first differences, and a separate table of proportional parts to tenths is included.

The user will benefit from a perusal of the introductory notes on the use of these tables, which include a detailed discussion of interpolation therein and other methods of use.

These excellent tables should well serve the purpose for which they are intended, and will be useful to others requiring a compact set of elementary mathematical tables.

J. W. W.

4[D].—C. ATTWOOD, *Six-Figure Trigonometrical Functions of Angles in Degrees and Minutes*, Practical Tables Series No. 1, Pergamon Press, Oxford, 1965, vii + 68 pp., 20 cm. Price 7s 6d (paperback).

This is the fifth edition of a set of trigonometrical tables originally published in 1942 by the Ford Motor Company, Ltd. in Dagenham, England.

The main table consists of natural values of the six standard functions to 6S for every sexagesimal minute, arranged semiquadrantally, with initial and terminal first differences shown at the top and bottom of each column of tabular data. Auxiliary tables of proportional parts for interpolation in tenths of a minute and for subdivisions of 5 seconds are given. A 2-page table gives decimal approximations of the first 100 multiples and submultiples of π and π^{-1} to 6 or 7S, as well as $\pi n^2/4$ for $n = 1(1)100$ to similar precision. A few other, related constants such as $\pi^{\pm 2}$, $\pi^{\pm 3}$, $\pi^{\pm 1/2}$, and $\pi^{1/3}$ are given to 6 or 7D in a footnote to this table.

The customary conversion tables from minutes and seconds to degrees (6D),

degrees, minutes, and seconds to radians (7D), and radians to degrees (5D) are also included.

The book concludes with a section on interpolation, including tables of $x \cot x$ and $x \csc x$ for $x = 0(10')500'$, and values of the coefficient in Bessel's interpolation formula with second differences (for interpolation to hundredths of a minute and to seconds), and finally a selected bibliography of outstanding related tables.

An attractive feature of this book and its successors in this series is the inclusion of facsimiles of pages from pertinent tables of historical interest and importance.

J. W. W.

5[D].—C. ATTWOOD, *Six-Figure Trigonometrical Functions of Angles in Hundredths of a Degree*, Practical Tables Series No. 2, Pergamon Press, Oxford, 1965, viii + 103 pp., 20 cm. Price 12s 6d (paperback).

In his preface to these tables the author discusses the advantages of the subdivision of the quadrant into decimal fractions of a degree and cites the classical example of Henry Briggs' celebrated *Trigonometria Brittanica*, published in 1633.

In the present work the principal table consists of the natural values to 6S of the six standard trigonometric functions at intervals of one-hundredth of a degree in the argument. First differences are shown at the head and foot of each tabular column. A table of proportional parts to expedite linear interpolation directly follows the main table.

The table of multiples of π and related numbers is reproduced from the first book in this series.

Conversion tables are presented to change degrees to radians (7D) and radians to degrees (5D).

The concluding section on interpolation parallels that in the first book, and a similar selected bibliography of outstanding related tables is included.

J. W. W.

6[C, D].—C. ATTWOOD, *Six-Figure Logarithmic Trigonometrical Functions of Angles in Degrees and Minutes*, Practical Tables Series No. 3, Pergamon Press, Oxford, 1965, vi + 75 pp., 20 cm. Price 7s 6d (paperback).

As the author points out, this is a companion to No. 1 in the Practical Tables Series. All entries in the main table of 6D common logarithms of the six trigonometric functions are printed in full, including the characteristics.

The first edition, published by the Ford Motor Company, Ltd. in Dagenham in 1945, included logarithms and antilogarithms; this arrangement was retained until the present (fifth) edition, which now relegates the tables of logarithms of numbers to a separate volume (No. 5).

A useful section of 16 pages is devoted to a recapitulation of trigonometrical formulas, including fundamental identities and the standard formulas for the solution of plane triangles.

The subject of interpolation in these tables is discussed in detail, and a valuable bibliography of related tables is appended.

J. W. W.