65[D].—JEAN PETERS, *Eight-Place Tables of Trigonometric Functions for Every Second of Arc*, Chelsea Publishing Company, Bronx, New York, 1963, xi + 954 p., 29 cm. Price $18.50.

The title listed above is that on the title page; the back of the binding merely has "Trigonometric Tables—Peters".

The main table here is a 900-page table giving the sine, cosine, tangent, and cotangent for every second of arc from 0° to 45°. The first three functions are given to 8D, while the cotangent has the same number of significant figures as the corresponding value of the tangent. Bounds for first differences are listed for each minute of arc. Peters' original (1939) table [1] was followed by two war-time photographic reprints, and this volume consists of a third photographic reprint. The previous editions have been reviewed at length in [2]. Peters' table is considered to be the standard (i.e., the best) 8-place trigonometric table [3].

The two (rather obvious) errors in [1] on pages 54 and 585, noted in [4], have not been corrected. Nor has the poorly printed digit 6 on page 783, that already appeared in the previous American reprint, and which is also noted in [4]. The printing here has the expected variation in digit blackness but is generally very good. The paper is of a fine quality.

The "appendix" contains reproductions of Peters' 1911 twenty-one place tables [5]. Specifically, Table II lists sin α and cos α to 21D for $\alpha = 0°0'(10')45°0'$, and Table III gives the same quantities for $\alpha = 0'0''(1'')10'0''$ together with first, second, and third differences. With these there is included an explanation, in English, for computing sin α and cos α to 20D from these two tables by the use of interpolation and addition formulas. These two tables were *not* included in the three earlier editions reviewed [2].

There also are three "supplementary" tables: nM to 21D for $n = 1(1)100$ where M is the Modulus $0.43429\cdots$; likewise there is given n/M; and finally the values of n seconds of arc, expressed in radians, to 21D for $n = 1(1)100$.

For biographical remarks concerning Johann Theodor Peters, "the greatest table-maker of all time," see [4, p. 889] and [2, p. 168–169].

D. S.

1. J. PETERS, *Achtstellige Tafel der trigonometrischen Funktionen für jede Sexagesimalsekunde des Quadraten*, Reichsamt für Landesaufnahme, Berlin, 1939.
2. R. C. ARCHIBALD, RMT 78, Notes 5 and 6, RMT 128, *Math. Comp.*, v. 1, 1943–1945, p. 11–12, 64–65, 147–148.
3. FLETCHER, MILLER, ROSENHEAD & COMRIE, *An Index of Mathematical Tables*, second edition, Addison-Wesley, Reading, Massachusetts, 1962, Vol. 1, p. 178–179.
4. *Ibid*, Vol. 2, p. 890.
5. J. PETERS, *Einundzwanzigstellige Werte der Funktionen Sinus und Cosinus*, Reimer, Berlin, 1911.

66[F].—V. L. GARDINER, R. B. LAZARUS & P. R. STEIN, *Tables of Solutions of the Diophantine Equation* $x^3 + y^3 = z^3 - d$, Los Alamos Scientific Laboratory, Los Alamos, New Mexico, 1963, 69 p., 28 cm. Copy deposited in the UMT file.

These three tables are described in this issue of *Mathematics of Computation* [1].