It should be pointed out that where the smallest division of a scale in the nomogram is uniform, the interval of the corresponding argument is indicated; otherwise the range of values covered by the scale is noted. It will be clear that the accuracy of a given nomogram may often be increased by interpolating between the marks provided.

CHARLES H. SMILEY

690[U].—D. H. SADLER, "Tables for astronomical polar navigation," Institute of Navigation, *Jn.*, v. 2, 1949, p. 9–24. 15.5 × 24.9 cm.

Summary: The special features of polar navigation are examined with a view to the design of tables for astronomical navigation in polar regions. The use of long intercepts and curved position lines is thoroughly investigated. It is shown that considerable economy of presentation can be achieved; as an example, a one-page table covering all bodies and both polar caps is given. Making the fullest use of polar astronomy, samples are given of permanent tables for the sun and stars independent of the *Air Almanac.*

MATHEMATICAL TABLES—ERRATA

References to Errata have been made in RMT **659** (Dale), **662** (Briggs), **665** (Boll), **666** (Lehmer), **672** (Feller), **676** (Huckel), **678** (Magnus & Oberhettinger), **682** (Bouwkamp, Meixner), **683** (Hallén); N **106** (Watson), **107** (FMR, Gauss), **109** (DeMorgan, Rheticus).

160.—D. H. LEHMER, *Guide to Tables in the Theory of Numbers*, 1941.

P. 14, table, col. 3, the second and third entries from the bottom should be interchanged.

P. 15, l. 9, *for* Creak 1, *read* Creak 2.

P. 47, l. −9, *for* 195 [twice], *read* 295.

P. 74, l. 18, *for* $29 \leq p$, *read* $17 \leq p$.

P. 76, l. 7, *for* VORONOˇ *read* VORONOĬ.

P. 95, l. 17, *for Haupt Exponents, read Haupt-Exponents.*

P. 102, Glaisher 16, l. 2, *for* 127, *read* 125.

P. 109, l. 10–11, *for milia accuratis, read millia accuratius.*

P. 114, in reference Ostrogradsky 1 *for* v. 1, 1838, *read* v. 3, 1836.

P. 129, the error for $n = 1019681$, occurs in Burckhardt 1, *not* 2. The error for $n = 2012603$ occurs in Burckhardt 2, *not* 3. *Delete* l. 4 (446021) and 5 (446023) since these errata were listed by Burckhardt himself, v. 1, p. IV.

P. 134, l. −6, *for* 61·330413, *read* 1399·14407.

P. 134, Cunningham 28, p. 243, col. 11, l. 18, *read* 9683, *instead of* 4683; p. 244, in tables giving elements y, of primes $(y^2 + 1)/13$, omit the entry 671, and *for* 3930 in col. 4, l. 6, *read* 2930.

P. 139, Euler 2_3, 193 factor of $81^2 + 1$ *not* of $82^2 + 1$; $1068^2 + 1 = 5^6 \cdot 73$, *not* $5^5 \cdot 73$; 773 factor of $1090^2 + 1$, *not* of $1080^2 + 1$.

P. 156, Kraitchik 4[f_1] *for* $p = 116537$, *read* 116337.

P. 174–6, the following items in the index are slightly out of alphabetical order: Forms, quartic; Ince; Logarithms; Pierce; Sum of powers.

A few careful readers have pointed out the carelessness of the first definition of the function $\psi(n)$ on p. 7. This function has only half the value attributed to it by this definition whenever n is divisible by 8.

D. H. L.

161.—D. N. LEHMER, "A complete census of 4 × 4 magic squares," Amer. Math. Soc., *Bull.*, v. 39, 1933, p. 764–767.

This paper contains a list, p. 767, of the number of normalized squares with various first columns and last rows.

For (15, 2, 1) $(10, 5, 3)_{12}$, $(9, 6, 3)_{11}$, $(8, 7, 3)_2$, $(8, 6, 4)_3$, *read* (15, 2, 1) $(10, 5, 3)_{15}$, $(9, 6, 3)_{13}$, $(8, 7, 3)_3$, $(8, 6, 4)_4$; *for* (14, 3, 1) $(8, 6, 4)_2$, *read* (14, 3, 1) $(8, 6, 4)_3$; *for* (12, 4, 2) $(11, 6, 1)_4$, *read* (12, 4, 2) $(11, 6, 1)_5$. These corrections change the total number of 4×4 magic squares from 539136 to 549504.

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UNPUBLISHED MATHEMATICAL TABLES

82[F].—L. POLETTI, *Factor Table and List of Primes for the 30000 natural numbers nearest 15,000,000.* Manuscript table deposited in the library of the American Math. Soc. New York.

This table gives new information for the range 14984970–15000000. The second half from 15000000 to 15015000, is also covered by W. P. Durfee's factor table for the 16th million, a table which is in the same library.

The factor table, which the author calls "Neocribrum," is a "type 3 table" arranged in the usual way modulo 30. On p. 1 are given data on the distribution of the primes in this range. Thus there are 1809 primes which are also classified modulo 30. There are 159 prime pairs. There are 113 consecutive composite numbers following 14996687.

Poletti is the author of *Tavole di Numeri Primi entro Limiti Diversi e Tavole Affini*, Milan, 1920.

D. H. L.

83[G, I].—H. E. SALZER, *Coefficients of the first fifteen General Laguerre Polynomials.* Ms. in possession of the author.

The writer announced previously (*MTAC*, v. 2, p. 89) a manuscript giving the coefficients of LAGUERRE polynomials, which are a special case of general Laguerre polynomials $L_n^{(\alpha)}(x)$, namely for $\alpha = 0$. The present manuscript gives the polynomials in α which are the coefficients of x^ν in the general Laguerre polynomial

$$L_n^{(\alpha)}(x) \equiv e^x x^{-\alpha} \frac{1}{n!}\left(\frac{d}{dx}\right)^n (e^{-x}x^{n+\alpha}) \equiv \sum_{\nu=0}^{n} \binom{n+\alpha}{n-\nu} \frac{(-x)^\nu}{\nu!}, \text{ for } \nu = 0(1)n,$$

and for $n = 0(1)15$.

H. E. SALZER

AUTOMATIC COMPUTING MACHINERY

Edited by the Staff of the Machine Development Laboratory of the National Bureau of Standards. Correspondence regarding the Section should be directed to Dr. E. W. CANNON, 418 South Building, National Bureau of Standards, Washington 25, D. C.

TECHNICAL DEVELOPMENTS

Our contribution under this heading, appearing earlier in this issue, is "The California Institute of Technology Electric Analogue Computer" by Prof. G. D. MCCANN.

DISCUSSIONS

Procedure for the Machine or Numerical Solution of Ordinary Linear Differential Equations for Two-Point Linear Boundary Values

Introduction. Increased attention is being focused on machine and numerical solutions of differential equations which cannot be solved by ordinary mathematical methods. There is need for more information on this