

growth of errors in a difference table, work sheets for use when solving linear equations, and various other matters which recall the sort of hand-computing drudgery that most of us would prefer to forget.

It is not assumed that the student will have access to a digital computer. Moreover the authors state: "The use of fast machines for the comparatively small calculations most often arising in engineering and industry is not advantageous, and sometimes it is actually inconvenient."

Clearly the authors have a very good idea of the public to which they address their book. Moreover they have a far more intimate knowledge of the sort of computing facilities generally available in the Soviet Union than do most of the readers of this review. When preparing their book, the authors made certain assumptions and acted consistently upon them. However, any person in the United States who made similar assumptions and produced a similar textbook would, in the opinion of the reviewer, be old-fashioned.

The book is pleasantly produced.

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**81[X].**—PATRICIA C. STAMPER, *Table of Gregory Coefficients*, The Johns Hopkins University, Applied Physics Laboratory, Silver Spring, Md. Ms. of two type-written pages deposited in the UMT File.

Herein are tabulated in floating-point form to 15S (generally unrounded) the first 50 coefficients of the Gregory integration formula, computed in double precision on an IBM 7094 by use of the recurrence formula

$$G_n = \sum_{i=1}^n (-1)^{i+1} G_{n-i} / (i+1) + (-1)^{n+1} n / 2(n+1)(n+2)$$

with  $G_0 = 0$ . This yields  $G_1 = \frac{1}{1^2}$ ,  $G_2 = -\frac{1}{2^4}$ ,  $\dots$ , in contradistinction to the values  $G_1 = \frac{1}{2}$ ,  $G_2 = -\frac{1}{1^2}$ ,  $G_3 = \frac{1}{2^4}$ , with reversed signs, which are found from the conventional recurrence relation for these numbers, which has  $(-1)^{n+1}/(n+1)$  for the second term on the right.

It seems appropriate to note here that the first 20 of these numbers have been computed in rational form by Lowan and Salzer [1]. Furthermore, their asymptotic character has been most recently investigated by Davis [2], who refers to them as "logarithmic numbers" because of their identification with the coefficients in the Maclaurin series for  $x/\ln(1+x)$ .

The present manuscript table appears to be the most extensive one of these coefficients extant.

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1. A. N. LOWAN & H. E. SALZER, "Tables of coefficients in numerical integration formulae," *J. Math. Phys.*, v. 22, 1943, pp. 49-50.

2. H. T. DAVIS, "The approximation of logarithmic numbers," *Amer. Math. Monthly*, v. 64, 1957, pp. 11-18.

EDITORIAL NOTE: It may be noted that no table of these coefficients, which are quite important (at least for small  $n$ ), appears in the celebrated, and otherwise quite complete, NBS *Handbook of Mathematical Functions with Formulas, Graphs, and Mathematical Tables*.