In a covering letter one of the authors indicates that this table is the second [2] in a series of fourteen, or more, number-theoretic tables. While a few of these duplicate, at least in part, some known tables, the latter are often on magnetic tape, or cost money, or are otherwise inaccessible. The entire proposed series will certainly be welcome to mathematicians working in number theory.

D. S.

1. WILHELM PATZ, *Tafel der regelmässigen Kettenbrüche*, Berlin Akademie-Verlag, 1955.
2. The first is *A Table of Quadratic Residues for all Primes less than 2350*. See RMT 35, *Math. Comp.*, v. 15, 1961, p. 200.

31 [I].—HERBERT E. SALZER & CHARLES H. RICHARDS, *Tables for Non-linear Interpolation*, 11 + 500 p., 29 cm., 1961. Deposited in the UMT file.

These extensive unpublished tables present to eight decimal places the values of the functions $A(x) = x(1 - x)/2$ and $B(x) = x(1 - x)(2 - x)/6$, corresponding to $x = 0(10^{-5})1$. This subinterval of the argument is ten times smaller than that occurring in any previous table of these functions.

These tables can be used for either direct or inverse interpolation, employing either advancing or central differences. In the introductory text are listed, with appropriate error bounds, the Gregory-Newton formula and Everett's formula, for direct quadratic and cubic interpolation, and formulas for both quadratic and cubic inverse interpolation, employing advancing differences and central differences. Examples of the use of these formulas are included.

The convenience of these tables is enhanced by their compact arrangement, which is achieved by tabulating $B(1 - x)$ next to $B(x)$. This juxtaposition, in conjunction with the relation $A(1 - x) = A(x)$, permits the argument x to range from 0 to 0.50000 on the left of the tables, while the complement $1 - x$ is shown on the right.

The authors note the identity $A(x) - B(x) \equiv B(1 - x)$, which can be used as a check on interpolated values of $A(x)$, $B(x)$ and $B(1 - x)$, and also as a method of obviating interpolation for $B(1 - x)$, following interpolation for $A(x)$ and $B(x)$.

Criteria for the need of these interpolation tables are stated explicitly, with reference to both advancing and central differences.

A valuable list of references to tables treating higher-order interpolation is included.

The authors add a precautionary note that this table is a preliminary print-out, not yet fully checked.

J. W. W.

32 [I, X].—GEORGE E. FORSYTHE & WOLFGANG R. WASOW, *Finite-Difference Methods for Partial Differential Equations*, John Wiley & Sons, Inc., New York, 1960, x + 444 p., 23 cm. Price $11.50

The solution of partial differential equations by finite-difference methods constitutes one of the key areas in numerical analysis which have undergone rapid progress during the last decade. These advances have been accelerated largely by the availability of high-speed calculators. As a result, the numerical solution of many types of partial differential equations has been made feasible. This is a development of major significance in applied mathematics.