The only method discussed for hyperbolic and parabolic problems is one invented by the author, which changes the problem into a boundary value problem. This is odd in a book which claims to be a survey. For several decades, the more conventional marching procedures have been used, often with great success, by an enormous number of people. The basic algorithmic ideas behind these methods, as well as a simplified stability theory, could have been presented easily, even to an audience which is not very sophisticated mathematically.

The last chapter deals with the author's method for the steady state Navier-Stokes problem. The author describes a series of numerical experiments, using only 81 interior meshpoints for Reynold's numbers up to $10^5$. There is no discussion of accuracy; in fact, it should be obvious that the flow described by the discrete model in such a case has only a formal connection with the differential equations. Because of the fact that such flows cannot be described with so few parameters, the treatment of these calculations should have been omitted or else put into proper perspective.

The author is well known as a master of the very sophisticated art of obtaining numerical solutions to difficult applied problems. But this book does not fulfill the promise indicated in the preface, because it concentrates on his own work and neglects too many important methods.

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34[7].—B. S. BERGER & H. MCALLISTER, *A Table of the Modified Bessel Functions* $K_n(x)$ *and* $I_n(x)$ *to at Least* 60S *for* $n = 0, 1$, *and* $x = 1, 2, \ldots, 40$, ms. of 4 typewritten sheets + 8 computer sheets (reduced) deposited in UMT file. (Copies also obtainable from Professor Berger, Department of Mechanical Engineering, University of Maryland, College Park, Md. 20742.)

Assisted by R. Carpenter, the authors have here produced a table of the modified Bessel functions of orders 0 and 1, for integer arguments ranging from 1 through 40. The tabular entries are presented in floating-point form and range in precision from 61S to 98S.

Standard power series for these Bessel functions were used in the underlying calculations, which were performed by multiple-precision arithmetic routines on an IBM 7094 system, the number of terms retained in the series ranging from 80 to 122, with increasing argument. The tabulated figures were subjected to the appropriate Wronskian check, which as the authors note, however, is satisfied even when erroneous values of Euler's constant and $\ln(x/2)$ have been used in the calculation of $K_n(x)$. Accordingly, the value of Euler's constant was carefully checked against several independent sources, and the computed natural logarithms were compared with those of Mansell [1].

The reviewer has compared the present basic tables with the tables of Aldis [2], and has thereby discovered in the latter, several errors which are listed elsewhere in this journal.

J. W. W.

1. W. E. MANSELL, *Tables of Natural and Common Logarithms to* 110 *Decimals*, Royal Society Mathematical Tables, Vol. 8, Cambridge Univ. Press, New York, 1964. (See *Math. Comp.*, v. 19, 1965, p. 332, RMT **35**.)

2. W. S. ALDIS, "Tables for the solution of the equation $d^2y/dx^2 + (1/x)\,dy/dx - (1 + n^2/x^2)y = 0$," *Proc. Roy. Soc. London*, v. 64, 1899, pp. 203–223.