The introductory part of this volume includes the definitions of the hypergeometric function and the various symmetry relationships, applications, approximations and interpolations, a summary of some useful formulas on sums of combinatorials, and a bibliography of 66 references. Examples given in applications include sequential procedure, test of the equality of two proportions, distribution of the number of exceedances, Bayesian prediction, and sampling inspection.

The reviewer's immediate reaction to these tables is that the type face is too small for easy reading and that the format makes it difficult to find the values of the indexing parameters. However, considering the 135,874 entries and the 726 pages, it would be difficult to eliminate these faults without prohibitive increase in both the size and cost of this volume.

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2[G, I, X, Z]. Ralph G. Stanton, *Numerical Methods for Science and Engineering*, Prentice-Hall, Inc., Englewood Cliffs, N. J., 1961, xii + 266 p., 23 cm. Price $9.00.

This book is designed as a textbook for an introductory course in numerical methods for students in the physical sciences and engineering with a good knowledge of calculus and differential equations. The selection of topics is fairly standard, as one would gather from the following chapter headings: Ordinary Finite Differences, Divided Differences, Central Differences, Inverse Interpolation and the Solution of Equations, Computation with Series and Integrals, Numerical Solution of Differential Equations, Linear Systems and Matrices, Solution of Linear Equations, Difference Equations, Solution of Differential Equations by Difference Equation Methods, and the Principles of Automatic Computation.

The author states that the book was developed from the standpoint of hand and desk-calculator techniques, and justifies this on the grounds of his belief that "the majority of workers in science and engineering can make great use of numerical methods without perhaps ever encountering a problem of sufficient length or complexity to justify programming it for an electronic computer." His final chapter, containing only eighteen pages about automatic computation, seems to confirm one's belief that the author views the modern field of numerical computation with automatic electronic computers as a spectator rather than as a participant.

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3[G, S]. Taro Shimpuku, "General Theory and Numerical Tables of Clebsch-Gordan Coefficients," *Progr. Theoret. Phys.*, Kyoto, Japan, Supplement No. 13, 1960, p. 1–135.

General formulas for the Clebsch-Gordan coefficients $(j_1j_2m_1m_2 \mid j_1j_2jm)$, in the notation of Condon and Shortley [1], have been given by Wigner and by Racah [2], [3]. These formulas are very complex and computationally inconvenient. Shimpuku states: "Here we derive a new general expression of $C - G$ coefficients from the theory of spinor representation in three-dimensional rotation group, and this expression has a convenient form for practical evaluation (for any given values of the parameters)."

Algebraic formulas for these coefficients, for the special cases $j_2 = \frac{1}{2}, 1, \frac{3}{2}, 2$ are given in [1], p. 76–77; similar formulas for $j_2 = \frac{5}{2}$ and 3 are available in sources noted in the references in Shimpuku's paper. Shimpuku tabulates the algebraic formulas for $j_2 = \frac{7}{2}, 4, \frac{9}{2}$, and 5.

Numerical tables have been compiled, by Simon at Oak Ridge, for all cases where $j_1 \leqq \frac{9}{2}, j_2 \leqq \frac{9}{2}$. Over 100 pages of numerical tables are given by Shimpuku; these tables cover $j_2 = 5, \frac{11}{2}$, and 6 for all $j_1 \leqq 6$. Each entry is expressed as the radical of a rational fraction.

Shimpuku does not refer to the recent tabulation by Rotenberg et al. [4] of $3 - j$ symbols, from which the Clebsch-Gordan coefficients can be readily obtained. This tabulation covers all values $j_1 \leqq 8, j_2 \leqq 8$. However, for the range covered by Shimpuku, many users may find his rational fractions more convenient than the expressions as products of powers of primes used by Rotenberg.

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1. E. U. CONDON & G. H. SHORTLEY, *The Theory of Atomic Spectra*, Cambridge University Press, New York, 1935, p. 75.
2. E. P. WIGNER, *Gruppentheorie und ihre Anwendung auf die Quantenmechanik der Atomspektren*, Friedrich Vieweg und Sohn, Braunschweig, 1931.
3. G. RACAH, "Theory of complex spectra II," *Phys. Rev.*, v. 62, 1942, p. 438.
4. M. ROTENBERG, R. BIVINS, N. METROPOLIS & J. K. WOOTEN, JR., *The 3-j and 6-j Symbols*, Technology Press, Cambridge, 1960. See *Math. Comp.*, v. 14, 1960, p. 382–383, Review 71.

4[I, X, Z]. NATIONAL PHYSICAL LABORATORY, *Modern Computing Methods*, Second Edition, Her Majesty's Stationery Office, London, 1961, 25 cm. Price $3.78.

This is the second edition of a booklet I praised highly when I reviewed its first edition (*MTAC*, v. 12, 1958, p. 230, Review 96). However, much has changed since then, and while I still feel that I shall recommend to every budding numerical analyst that he consult this booklet, I must add here to its list of limitations. I am tempted to say that it is "modern," much the same as Gilbert and Sullivan's Major General, but this would be entirely too harsh.

The booklet contains nothing about linear programming, assignment problems, or discrete variable calculations, which play a large role in computation, at least in the United States. (Beale in the United Kingdom might claim that these problems occur there also.) There is nothing about the Monte Carlo method which is very popular, at least in the southwest sections of the United States. (Hammersley in the United Kingdom might claim that these problems occur there also.) There is essentially nothing (nine lines of text, washing their hands of the whole subject) concerning latent roots and characteristic vectors of unsymmetric matrices, although some of these problems are vital in the study of stability. (This is most disappointing of all, for the workers at the National Physical Laboratory were spectacular in their early attacks on matrix problems and their reporting of their experiences.) There is a tendency to make overly dogmatic statements: "For