

of Erdős, and the book may be regarded as an introduction to some of the work of this prolific mathematician. The problems are classified by subject matter: divisibility problems concerning finite and infinite sequences, additive problems, congruences, arithmetic progressions, primes, diophantine equations, etc. Here is problem no. 60 (for which no discussion or references are given):

$m = 2^k - 2$ and $n = 2^k(2^k - 2)$ have the same prime divisors. Likewise $m + 1$ and $n + 1$ have the same prime divisors. Are there any other such examples?

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43[G].—R. L. GOODSTEIN, *Boolean Algebra*, The MacMillan Company, New York, 1963, viii + 140 p., 20 cm. Price \$1.95.

By almost every standard this is a good book; the subject matter receives careful treatment, the presentation is on an elementary level, interesting and important material is covered, and many exercises are included together with answers. After informally introducing the basic ideas of Boolean Algebra, the book proceeds to an axiomatic treatment of the subject. There then follows a chapter on Boolean equations, a chapter on "sentence logic", and finally a chapter on lattices. The neophyte will gain much from this short text.

But I would like to take this opportunity to point out a serious omission in content that this book shares with many other mathematics books of this type. The revival of interest in Boolean Algebra is undoubtedly due to its use in switching-circuit theory. For the reader who is studying Boolean Algebra with this application in mind, the book does not meet the need. In no place is switching-circuit theory mentioned. And the methods are presented only in the abstract: computational methods and techniques for solving problems are studiously avoided.

For example Boolean equations are discussed and particular solutions are given to certain selected equations. The solutions are given first, and then it is demonstrated that these solutions do indeed satisfy the equations. How one obtains these solutions to begin with is left a mystery, even though methods for determining solutions to the simple equations considered are quite elementary. For instance, consider the equation $(A \cap X) \cup (B \cap X') = 0$, discussed on page 62 of the book. There are only four possible combinations of values that A and B can have together; consequently for each of these combinations we can see what value of X will satisfy the equation. The following table demonstrates these, where it is clear that the case $A = 1, B = 1$, can not lead to a solution:

$$\begin{array}{rcccccc}
 (A \cap X) \cup (B \cap X') = 0 & & & & & & \\
 0 & 0, 1 & 0 & 1, 0 & 0 & & \\
 1 & 0 & 0 & 1 & 0 & & \\
 0 & 1 & 1 & 0 & 0 & & \\
 1 & — & 1 & — & — & &
 \end{array}$$

Immediately one sees that the two possible solutions are $X = \bar{A}$ and $X = B$ where $A \cap B = 0$.

Too often in mathematics texts, the applications are ignored. This I believe to be a serious defect, not just in this text but in a large majority of books in the English language. This is not to say that a mathematical text should lack rigor or

detail in its treatment of the subject matter, but rather that some degree of attention should be paid to various practical applications of the subject matter. Such applications will tend to stimulate the student and better orient him with respect to the role of mathematics in modern science. This remark holds particularly for Boolean Algebra, where the eventual application will more likely than not be the basis for the reader's interest in the subject.

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44[G, S].—BENJAMIN E. CHI, *A Table of Clebsch-Gordan Coefficients*, Rensselaer Polytechnic Institute, New York, 1962, xi + 335 p., 27.5 cm. Price \$3.00.

We have recently had a flurry of interest in the tabulation of values of the Clebsch-Gordan coefficients for ever higher numerical values of the angular-momentum parameters. These coefficients are the quantum-mechanical vector-coupling coefficients denoted by Condon and Shortley [1] as $(j_1 j_2 m_1 m_2 | j_1 j_2 j m)$, with j_1, j_2, j restricted to nonnegative integers or half-integers satisfying the "triangle" conditions, with m_1 ranging from j_1 to $-j_1$ in integral intervals, m_2 similarly from j_2 to $-j_2$, and with $m = m_1 + m_2$.

Three tabulations, of different types, have recently been reviewed in this journal [2, 3, 4]. The present volume contains, in its introduction, a useful bibliography of all the tables that have been computed. These tables are of three types:

(a) Algebraic tables: if j_2, m_2 , and $j - j_1$ are given fixed numerical values, the coefficient can be written as a relatively simple algebraic function of j_1 and m .

(b) Numerical tables in which the coefficients are expressed as square roots of rational numbers.

(c) Numerical tables in which the coefficients are expressed as decimal numbers.

The present table is of the third type and extends the available decimal tables to all values of j_1 and j from 0 to 10 in steps of $\frac{1}{2}$, but only for $j_2 = 1$ to 6 in steps of 1. The coefficients are given to 7 decimal places. No apology is given for the restriction of j_2 to *integral* values.

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1. E. U. CONDON & G. H. SHORTLEY, *The Theory of Atomic Spectra*, Cambridge University Press, New York, 1935.

2. B. J. SEARS & M. G. RADTKE, *Algebraic Tables of Clebsch-Gordan Coefficients*, Report AECL No. 746, Atomic Energy of Canada Limited, Chalk River, Ontario, 1954. See *Math. Comp.* v. 13, 1959, p. 318, RMT 51.

3. 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, RMT 71.

4. TARO SHIMPUKU, "General Theory and Numerical Tables of Clebsch-Gordan Coefficients," *Progr. Theoret. Phys.*, Kyoto, Japan, Supplement No. 13, 1960, p. 1-135. See *Math. Comp.* v. 16, 1962, p. 114-115, RMT 3.

45[G, X].—T. L. SAATY, Editor, *Lectures on Modern Mathematics, Volume I*, John Wiley & Sons, Inc., New York, 1963, ix + 175 p., 22 cm. Price \$5.75.

From the editor's preface: "The six expository lectures appearing in this volume are the first in a series of eighteen lectures being given at George Washington Uni-