introduced and their properties discussed. Matrix inversion and the solution of linear equations are combined through the use of the Gauss-Jordan elimination method. In Chapter IV rings, integral domains, and fields are introduced and illustrated. Chapter V considers inequalities and the ideas of this chapter are applied to find upper and lower bounds to simple problems of area estimation in Chapter VI. Finally some iteration techniques and polynomial interpolations are considered in Chapter VII.

An unusual feature of the book is the introduction of FORTRAN programming in Chapter III. In the following chapters many problems are solved by means of computer programs. The sections on programming appear adequate, but could well be supplemented by additional material. Any teacher who is unfamiliar with FORTRAN programming cannot depend on this text for all of the answers.

The reviewer feels that this book is carefully done and the mathematics is rigorously presented. Occasional theorems of a more difficult nature are stated without proof. This book may well find considerable use in assisting teachers confronted with rapidly changing curricula in our nation's high schools and junior colleges.

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73[I].—A. O. Gelfond, *Calcul des Différences Finies*, Dunod, Paris, 1963, x + 378 p., 25 cm. Price 58 F.

This is a translation into French of A. O. Gelfond's *Ischislenie Konechnikh Ratznostei*, Moscow, 1952, and I, for one, am glad to have the work of this great analyst in a more accessible tongue. The French edition embodies corrections and some emendations. For example, Chapter I now includes a section entitled "Interpolation and the Moment Problem in the Complex Plane".

As one looks at the chapter titles, one is apt to get the impression that this book contains only "standard material". This is not so; there are new and interesting results throughout, many of them due to the author. Bernard Berenson once said that a book is worth its place on the shelf if it contains *one* thing that no other book has. Gelfond's book passes Berenson's test by a wide, wide margin, and those of us who like interpolatory function theory will enjoy browsing and studying his work in this new edition.

Table of contents is as follows: Chapter 1, Interpolation; Chapter 2, Newton Series; Chapter 3, Construction of an Entire Function given certain Interpolatory Information; Chapter 4, The Summing of Functions; Bernoulli Numbers and Polynomials; and Chapter 5, Finite Difference Equations.

P. J. D.

74[K].—D. J. FINNEY, R. LATSCHA, B. M. BENNETT & P. HSU, *Tables for Testing Significance in a 2 × 2 Contingency Table*, Cambridge University Press, American Branch, New York, 1963, vi + 102 p., 27 cm. Price \$3.25.

These tables are used for testing the significance of deviations from proportionality in a 2 × 2 contingency table

	With Attribute	Without Attribute	Total
Series I	a	$A - a$	A
Series II	b	$B - b$	B
	r	$N - r$	N

with fixed marginal totals $A \geqq B$, and $a/A \geqq b/B$.

The present volume is the result of computations carried out by several authors over a number of years. Finney [1] gave a table of the one-tail significance levels of b, that is, of the largest integers b_p such that $\text{Prob}\{b \leqq b_p\} \leqq p$, for $p = .05, .025, .01$, and $.005$ and all permissible combinations of a, A, and B with $A = 3(1)15$, $B \leqq A$, together with the corresponding values of actual tail probability $\text{Prob}\{b \leqq b_p\}$ to 3D. Latscha [2] extended the Finney table for $A = 16(1)20$. B. M. Bennett and P. Hsu have extended the full computations in the Finney format for $21 \leqq A \leqq 45$, $B \leqq A$, adding a fourth decimal place in the exact probabilities. (See *Math. Comp.*, v. 16, 1962, p. 252–253, RMT **20**; ibid., p. 503, RMT **58**.)

Table 1 in the present volume includes the Finney and Latscha tables, with known errors corrected, and the full Bennett-Hsu tables up to $B \leqq A \leqq 30$. As in the original Finney format, the listed significant value of b is such that $\text{Prob}\{b \leqq b_p\}$ does not exceed the nominal significance level p, and is sometimes much less than the nominal level, because of the discrete nature of the probability distribution. The inclusion of the exact probability is therefore useful for the practical man who may wish to use that value of b for which $\Pr\{b \leqq b_p\}$ is closest to p. For example, for $A = 14$, $B = 11$, and $a = 14$, Table 1 gives $b_{.025} = 6$ with $\text{Prob}\{b \leqq b_{.025}\} = 0.009$, whereas $b_{.05} = 7$ with $\text{Prob}\{b \leqq b_{.05}\} = 0.026$. Consequently, by taking 7 as the critical value of b, the test will be conducted more nearly at the 0.025 level of significance.

Table 2 gives Bennett and Hsu's values for $31 \leqq A \leqq 40$, $B \leqq A$, in abridged form, i.e. gives only the two significant values $b_{.05}$ and $b_{.01}$, and not the exact probabilities. The whole of the Bennett and Hsu table for $A = 21(1)45$, $B \leqq A$, has been deposited in the UMT file.

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1. D. J. Finney, "The Fisher-Yates test of significance in 2×2 contingency tables," *Biometrika*, v. 35, Parts 1 and 2, May 1948, pp. 145 156. [*MTAC*, v. 3, 1948, p. 359]
2. R. Latscha, "Tests of significance in a 2×2 contingency table: Extension of Finney's table," *Biometrika*, v. 40, Parts 1 and 2, June 1953, p. 74-86. [*MTAC*, v. 8, 1954, p. 157]

75[K].—Sol Weintraub, *Tables of the Cumulative Binomial Probability Distribution for Small Values of p*, The Free Press of Glencoe, New York, 1963, xxix + 818 p., 28 cm. Price $19.95.

This book of tables gives to 10 decimals the cumulative binomial sums

$$E(n, r, p) = \sum_{i=r}^{n} \binom{n}{i} p^i (1 - p)^{n-i}$$

for $p = .00001, .0001(.0001).001(.001).100$, $n = 1(1)100$, $r = 1(1)n$. Through the relation $E(n, r, p) = 1 - E(n, n - r + 1, 1 - p)$ one may also readily obtain the cumulative sums for $p \geqq .9$ from this volume. The tables, which are arranged in