Chapter 2 the author introduces random variables, expectation and variance. The important notion of a martingale is also given, and illustrated with a simple "stock market" model. Chapter 3 deals with limit theorems, but only by approximation to finite range experiments. The discussion includes the weak law of large numbers, central limit theorem and arc sine law. Each is illustrated with illuminating computer graphics and several simulations. Key ideas, e.g. Chebyshev's inequality and the reflection principle, are discussed, but details of proofs are often omitted. The final chapter gives the basic theory of finite Markov chains, culminating in the limit theorem for regular chains. The text is complemented by many problems, of greatly varying difficulty, often involving the writing of a BASIC program.

The book constitutes a novel approach to elementary probability theory, which should appeal to students and teachers interested in a computer oriented perspective. The tenor of the discussion is casual, with an emphasis on ideas rather than formalities. The computer simulations add a dimension of tangibility to the subject matter, a dimension often lacking in the modern, abstract approach to mathematics.

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15 [**4.10.4, 5.05.4, 5.10.3, 5.15.3, 5.20.4**].—J. R. WHITEMAN, *A Bibliography for Finite Elements*, Academic Press, Inc., London, New York and San Francisco, 1975, 26 cm. Price $9.25.

16 [**4.00, 5.00**].—R. ANSORGE, L. COLLATZ, G. HÄMMERLIN & W. TÖRNIG, Editors, *Numerische Behandlung von Differentialgleichungen*, International Series of Numerical Mathematics, Birkhäuser Verlag, Basel, Switzerland, 1975, 355 pp., 25 cm. Price approximately $18.00.

The volume contains papers presented at a meeting organized by R. Ansorge, L. Collatz, G. Hämmerlin and W. Törnig. This meeting took place at the Mathematical Research Institute at Oberwolfach, Germany from June 9–June 14, 1974.

J. B.

17 [**2.05**].—L. COLLATZ & G. MEINARDUS, Editors, *Numerische Methoden der Approximationstheorie*, Band 2, International Series of Numerical Mathematics, Birkhäuser Verlag, Basel, Switzerland, 1975, 199 pp., 25 cm. Price approximately $14.00.

This volume contains papers presented at a meeting organized by L. Collatz and G. Meinardus. This meeting took place at the Mathematical Research Institute at Oberwolfach, Germany from June 3–June 9, 1973.

J. B.

18 [**9**].—G. SCHRUTKA v. RECHTENSTAMM, *Tabelle der (Relativ)-Klassenzahlen der Kreiskörper deren ϕ-Funktion des Wurtzelexponenten (Grad) nicht grösser als* 256 *ist,* Deutschen Akad. Wiss. Berlin, Abhandlungen, Kl. Math. Phys. Tech., 1964, No. 2, 64 pp.

This remarkable work, a labor of some twenty-eight years, has apparently gone unreviewed and unnoticed for more than a decade. It is an extension of a small table of H. Hasse [1] which in turn is an elaboration of an original work of E. Kummer [2] on cyclotomic fields.

As the title indicates, it covers fields and subfields generated by $\exp(2\pi i/f)$ whenever Euler's $\phi(f) \leqslant 256$. The tables of Kummer and Hasse are for $f \leqslant 100$. Schrutka