on pp. 160–161 the statement of Theorem 97 is interrupted by Table 9.3.

H. N.

17[62-01, 62J10, 62Kxx, 65Fxx].—RICHARD M. HEIBERGER, *Computation for the Analysis of Designed Experiments*, Wiley Series in Probability and Mathematical Statistics—Applied Probability and Statistics, Wiley, New York, 1989, xv + 683 pp., 24 cm. Price $59.95.

ANOVA (analysis of variance) programs form an important part of statistical software packages. This book discusses in great detail how ANOVA programs are constructed and how their components work. Broader issues in the design of software systems for statistical applications are also treated quite extensively. The book is divided into five parts which cover statistically designed experiments, programming systems, least squares and ANOVA, the interpretation of design specifications, and the analysis of statistically designed experiments.

The treatment of these topics is very much oriented towards application and computation, with little emphasis on the development of the underlying theory. Most concepts are introduced by examples and few words are lost on basic ideas like Latin squares or block designs. An introductory chapter on the theoretical underpinnings would have done no harm. The author gives a lot of useful advice on programming style and on the handling of program systems on the user level. The book contains a generous supply of programs in FORTRAN, BASIC, APL, and C and many worked-out examples illustrating computational procedures. Compilable source codes for all programs are included in a floppy disk, which is packaged with the book and formatted for the IBM PC or compatible computers. For the numerical analyst, the most interesting part of the book is Chapter 11, which describes how techniques of numerical linear algebra such as QR factorizations, Householder reflections, Cholesky factorizations, and LU factorizations can be applied to least squares problems.

The book is eminently suitable as a guide for the practitioner because of its careful expository style and its stress on "hands-on" computations. The mathematical prerequisites are elementary linear algebra and a first course in statistics. Fluency in at least one programming language is assumed.

H. N.

18[11-01, 11A51, 11Y05, 11Y11].—DAVID M. BRESSOUD, *Factorization and Primality Testing*, Undergraduate Texts in Mathematics, Springer, New York, 1989, xiii + 237 pp., 24 cm. Price $45.00.

Is it possible to teach an undergraduate, beginning number theory course by focusing almost entirely on factoring and primality testing? The thought is that these topics use so much number theory that little in a standard course would be left out. This is Bressoud's premise and his book is a text for such