process. These terms are then summed to give a resulting phenomenological equation that describes the given process.

Balescu, using the techniques developed by the Prigogine school, has quite successfully elucidated the properties of systems of charged particles. For example, his derivation of an expression for the collision term in the kinetic equation for a plasma is classic. The topics described in his book cover many interesting and important aspects of the subject and include treatments of both classical and quantum systems. A few of these topics include the Vlasov equation, the dispersion relation, the Landau (Fokker-Planck) equation, the ring approximation and equilibrium, quantum plasmas, and binary correlations.

This book can be warmly recommended not only to workers in the fields of statistical mechanics and plasma physics but also to students of physics and chemistry who wish to learn firsthand, and in depth, something about the new kinetic theory of charged particles.

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The New Mathematics

A New Look at Elementary Mathematics. Benjamin E. Mitchell and Haskell Cohen. Prentice-Hall, Englewood Cliffs, N.J., 1965. xii + 354 pp. Illus. $7.95.

Within the compass of one small volume (281 pages of actual text) Mitchell and Cohen have compressed a mathematical package of surprising magnitude and diversity. Theirs is also a work of solid and genuine achievement. Among other things, the book attempts to combine axiomatic concepts with a down-to-earth examination of computational processes, and the resulting blend of theory and application is a very successful one. In short, what might have been a miscegenation of structure and stunts has emerged a happy hybrid.

In effectively forging the connection between abstract algebra and fourth grade arithmetic, the authors have made a significant contribution to the ever-growing arsenal of materials for the training of teachers. The overall content is one of considerable scope, taking in a wide range of territory. In fact, there is something here for every member of the family: a comforting explanation for mother to allay anxieties over her daughter's "new-fangled" method of long division; games of 11-penny pickup and magic-age cards for the youngsters; mathematics of finance for the junior accountant, complete with annuity and compound interest tables; and a nice bit of operations research and management science for father.

More to the point, the variety of subject matter should give the prospective and in-service teacher a wealth of ideas with which he can enrich the classroom, while the theoretical foundations should furnish a welcome sense of security in dealing with insistent questions of "Why?"

Combining easy readability with mathematical exactitude and careful terminology, the authors offer a sound treatment of many important mathematical topics, including sets, numeration and number theory, measurement, approximations, functions and graphs, and a bit of probability, statistics, and linear programming.

In any ambitious project of this sort, which attempts so much in so little space, it is inevitable that something has to give. In this case I feel that there is perhaps a costly condensation in the development of some of the more abstract theoretical concepts. One moves, for example, from the counting numbers through the integers to the rationals, at a nearly breathtaking pace and without much time allowed for the customary motivations along the way.

In the same spirit of economy the authors have allotted one small paragraph to the subject of groups, which one feels might have been afforded a somewhat more generous treatment. Inequalities, which appear fleetingly toward the end of the book, could perhaps have also been examined in greater detail.

One cannot have everything, however, and surely a work such as this can do much to eliminate many of the misconceptions, misinterpretations, and misanthropic attitudes that are surging about regarding the "new mathematics." The book may also bring increasing insight and interest into the lives and professional practices of our future teachers.

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Tissue Transplantation

Give and Take: The Development of Tissue Transplantation. Francis D. Moore. Saunders, Philadelphia, 1964. xii + 182 pp. Illus. $5.50.

Although the idea of homotransplantation of organs and tissues in man, for the purpose of alleviating suffering, is an old one, its feasibility was dependent on the great scientific advances made during the late 19th century in surgical technique and asepsis. Consequently, the field of transplantation represents a body of knowledge accumulated during little more than half a century. The tremendous surge of interest in this field during the last decade which resulted from significant breakthroughs made in the experimental laboratories in the late 1940's and early 1950's, has brought human transplantation to the threshold of clinical success. It is this fascinating story that Moore has set down in his book.

This book is directed at a wide range of readers, including students, physicians not intimately involved with clinical transplantation, interested individuals, and, most importantly, patients and their relatives and prospective donors. Written in more or less chronological fashion, *Give and Take* is primarily the story of the development of renal homotransplantation in man, the area that Moore has personnally had a role in shaping. In this framework, he presents the major discoveries of the many basic scientists whose works were subsequently put to successful clinical application; the book is liberally sprinkled with famous names and institutions, and reads somewhat like a "Who's Who" in transplantation. Illustrations, drawings, and pictures are handled tastefully and used efficiently to enhance the text. Although many of the specialized terms must be separately explained to the uninitiated reader, these explanations and definitions are handled with unusual care, either within the text or in footnotes. The bibliography is adequate but not extensive, and the index is complete.

This book will be welcomed by many, but especially by patients and others personally involved with each clinical situation, where hurried explanations made by busy, concerned physicians too often are misunderstood and misinterpreted.

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