the reviewer read carefully, a number of minor misprints and errors were found. Thus the reader should be warned to proceed with some care. Some of the terminology adopted by the author is unfortunate. For example, the term "simple" is used to describe matroids which have been trivially reduced by identifying mutually dependent elements. However, this term when applied to geometric lattices means something quite different. Since matroids and geometric lattices are so closely related, this terminology could lead to some confusion.

As in many recent books, the sets of exercises tend to be miscellaneous collections of results which the author decided not to include in the main body of the text. They vary in difficulty from trivialities to results which were only obtained through a major research effort. Unless the reader is an expert in the field he may find it hard to distinguish these two categories. Exercises make a significant contribution to a book at this level when they stimulate the reader's interest and provide him with an attractive opportunity to test his understanding of the material. In order to do this, the exercises should be carefully selected with regard to interest, subject matter content, and level of difficulty. Unfortunately, the exercise sets in this volume do not show this kind of careful preparation.

In spite of these shortcomings, this account of the present status of matroid theory will be a useful resource for both the novice and the expert in this subject area.

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The theory of error-correcting codes. I and II, by F. J. MacWilliams and N. J. A. Sloane, North-Holland, Amsterdam, New York, Oxford, 1977, ix + 762 pp., $50.95.

The first few sentences of the preface are as follows: "Coding theory began in the late 1940s with the work of Golay, Hamming and Shannon. Although it has its origins in an engineering problem, the subject has developed by using more and more sophisticated mathematical techniques. It is our goal to present the theory of error-correcting codes in a simple, easily understandable manner, and yet also to cover all the important aspects of the subject." The authors have been eminently successful in attaining their goal. For this reason these volumes are excellent as a text. They are also excellent as a reference for people working in coding as well as other mathematicians who are interested in applications of algebra or combinatorics or just interested in this new, fascinating subject. Since Shannon first demonstrated, using probabilistic methods, that one could communicate as reliably as desired by using long enough error-correcting codes, much work has gone into this subject by both mathematicians and electrical engineers. This has resulted in the construction and analysis of various codes and families of codes and the devising of practical decoding algorithms. It has also resulted in a growing mathematical theory of error-correcting codes which uses techniques from a variety of different areas as well as its own techniques.