

To summarize, the authors accomplish their objective painlessly and professionally. The book merits the serious consideration of teachers of mathematics at all levels.

W.G. Brown, McGill University

Finite functions: an introduction to combinatorial mathematics, by Henry Sharp Jr. Prentice-Hall, Englewood Cliffs, N. J., 1965. vii + 97 pages. \$4.25.

The first half of this book is devoted to definitions notation and obvious theorems in "sets and functions"; the latter half does the same for combinatorial mathematics. Not one substantial theorem is proved. The net effect is to completely hide the natural beauty of combinatorics in a deluge of unnecessary and confusing jargon and notation - another example of the "new" mathematics. One definition and one theorem, taken from the book, will suffice to illustrate its spirit. On page 45: "Definition: A characteristic function on the finite set  $A$  is called a combination on  $A$ . If the characteristic function has power  $r$ , then it is called a combination of power  $r$  on  $A$ ".

After explaining: "Let  $n$  be a positive integer and  $f$  be the function defined on  $\{0, 1, 2, \dots, n\}$  by the formula  $f(r) = \{n\}_r$ ", (the author uses  $\{n\}_r$  instead of the universally accepted  $\binom{n}{r}$  to denote  $n!/r!(n-r)!$ ) the author states, on page 51, "Theorem: For a given positive integer  $n$ , let  $m$  be such that  $n = 2m$  or  $n = 2m + 1$ . Then the maximum value in  $f$  is  $f(m)$ . Furthermore, if  $n$  is even then  $f(m) > f(r)$  for all  $r \neq m$ , and if  $n$  is odd then  $f(m) = f(m+1)$  and  $f(m) > f(r)$  for all  $r$  except  $m$  and  $m+1$ ."

This book can take its rightful place, on the lowest shelf of the bookcase, next to Selby and Sweet's "Sets, relations, functions: An introduction", to which the author refers.

William Moser, McGill University

Ordinary differential equations - a first course, by Fred Brauer and John A. Nohel. W.A. Benjamin, Inc., New York, 1967. \$10.75.

Undergraduate textbooks in ordinary differential equations abound. The book under review combines many of the desirable features to be found in its predecessors. It strikes a reasonable balance between mathematical rigour and intuitive motivation.

The topics covered are, in order: first order equations; equations with constant coefficients; series methods; boundary value problems; linear systems; existence theorems; numerical methods; Laplace transform. This order is pedagogically sound - it passes naturally from easy to hard topics. Of course the existence theorem