99[Z].—FRITZ REUTTER, *Die nomographische Darstellung von Funktionen einer komplexen Veränderlichen und damit in Zusammenhang stehende Fragen der praktischen Mathematik*, DK 518.3:517.53. Forschungsberichte des Landes Nordrhein-Westfalen, herausgegeben durch das Kultusministerium, Nr. 912, Westdeutscher Verlag, Köln and Opladen, 1960, 123 p., 30 cm. Price DM 35.40.

This volume is primarily a collection of material given by the author in a series of previously published papers. The first part of the book deals with methods to represent the analytic function $w(z) = u(x,y) + i\,v(x,y)$ by a nomogram with two parallel nonlinear scales and two "sliding" curves. For example, a reading-line tangent to the curves $u(x,y) = c_1$ and $v(x,y) = c_2$, where c_1 and c_2 are constants, intersects the parallel scales in points from which x and y may be read. Variations of this technique are also considered. For instance, the parallel scales may represent u and v while the sliding curves represent x and y.

Examples include the elementary functions $w = z^3$, $z = w^{1/3}$, $w = \sin z$ and $w = \ln z$. Considerable attention is devoted to the Jacobian and Weierstrassian elliptic functions. The 30 illustrative nomograms which make up the second part of the volume are very neatly drawn and easily read. The author also includes on each figure at least two numerical problems so that the reader can quickly become familiar with their use.

Y. L. L.

100[Z].—MARSHAL H. WRUBEL, *A Primer of Programming for Digital Computers*, McGraw-Hill Book Co., Inc., New York, 1959, xv + 230 p., 24 cm. Price $7.50.

As a good professor presents a new topic through ideas which are already familiar to his students, Professor Wrubel, in the introductory chapter of *A Primer of Programming for Digital Computers*, smoothly leads his reader to a basic understanding of the electronic digital computer and of the nature of programming. The potential programmer is cautioned not to attribute superhuman powers to the computer, and he is advised to consider carefully the value of a computer solution to each individual problem.

Written for "scientists, engineers and their students who are planning to use computers as tools of research," the primer is divided into two sections: Elementary Programming and Advanced Programming. The first section instructs the novice in the elements of programming as illustrated by the Bell Laboratories interpretive language. The second section trains the more experienced programmer in advanced techniques and in the use of a machine (IBM 650) language. Chapter subheadings in both sections follow the same sequence, enabling the reader to easily apply his basic knowledge to the more complex programming concepts.

In his approach to the elements of programming Professor Wrubel defines and builds on each component from the basic digit through the word and the language, until he completes his construction of the computer program. Arithmetic, logical, and input-output control instructions are taught with clarity. Taking advantage of his readers' familiarity with mathematical notation, the author employs symbolism freely in explaining such aspects of programming as conditional transfers, address modification and looping, and subroutines. Professor Wrubel also describes and