Applied and Computational Complex Analysis. By Peter Henrici. Wiley-Interscience, 1986. vii 637 pp.

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This book is not a "textbook" in the ordinary sense of the word. The usual textbook is something that is trying to be all things to all people. The late Professor Henrici has written a book that is the distillation of his life's work as a scholar and research mathematician. The book is a lively and lovely piece of work and, like any truly interesting creation, it is full of tensions and contradictions.

The fact that there is a section on digital signal processing, in a book whose last chapter contains a proof of the Bieberbach Conjecture, may suggest that the author has made a rather eclectic choice of topics, but the flow of ideas is very orderly. The presentation of material is rigorous, but the author avoids overburdening the reader by choosing hypotheses for his results that are weak enough for many practical problems, yet strong enough to yield accessible proofs. This is strikingly demonstrated in his discussion of Cauchy integrals in section 14.1 and the results of Calderon discussed in the notes at the end of the section. There are many existential results, but care is taken to ensure effective computation methods. For instance, in Professor Henrici's discussion in § 14.6, entitled "Cauchy Integrals on Straight Line Segments," he arrives at Theorem 14.6a. This is immediately followed by the statement that "Theorem 14.6a does not express what from a numerical point of view may be its most significant aspect." Professor Henrici then reformulates Theorem 14.6a as Algorithm 14.6b, which provides a numerical method for carrying out a desired calculation.

In the Introduction, he states:

> Authors who primarily write for professional mathematicians may cultivate a style where a large number of facts are presented as concisely and economically as possible. However, the present work is not directed exclusively, and perhaps not even primarily, toward such mathematicians. A lifelong career in teaching this kind of reader has convinced me that, however great their appreciation for the logical coherence of the subject, their even greater concern is why they should be interested in it. Thus, time and again, I have allotted valuable space to the task of motivating what is ahead. Moreover, whenever facts or "theorems" are stated—and there are plenty of these —I have endeavored to find formulations that in their essence are intelligible also to readers who did not memorize all the preceding definitions. If I am accused of wordiness and of being, on occasion, repetitive, this is the price I must pay for attempting to reach a larger audience.

The final contradiction is that this book is, in my opinion, admirably suited for educating mathematicians.

An Outline of Set Theory. By James M. Henle. Problem Books in Mathematics, Springer-Verlag, New York, 1986, viii + 145 pp.

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That there is something wrong with the present teaching of mathematics is indisputable. Controversy arises when one tries to pinpoint exactly what is wrong,