Topics in complex function theory, by Carl L. Siegel, Interscience Tracts in Pure and Applied Mathematics, No. 25, Vol. I, 1969, ix+186 pp., (Translator: A. Shenitzer and D. Solitar); Vol. II, 1971, 256 pp., (Translator: A. Shenitzer and M. Tretkoff); Vol. III, 1973, ix+244 pp., (Translator: A. Shenitzer and M. Tretkoff).

The late Solomon Lefschetz once defined a topological space as "a space where every point has a neighborhood and every neighborhood has a point." On page 30 of volume II of the set under review here we find: "Let G be a space of points p for which neighborhoods are defined in the usual way." The first quotation is brought forth because it makes explicit the underlying feeling of the second. It is that in these three books, the modern spirit of abstraction is given a definitely secondary role, consciously and deliberately pushed out of the way for the concrete development of the area which these books treat, that of algebraic functions over the complex numbers and of automorphic functions and forms. In the reviewer's opinion these books are an excellent treatment of that subject, well-seasoned with numerous examples and important special results. In spite of the fact that there may be slicker treatments of various parts of the subject on the market, the relatively uninitiated graduate student who wants an introduction, as well as the specialist who wants to look up complete proofs for "well-known" facts whose proof is difficult to find elsewhere, would be well advised to turn to this set. This is not to say it has no faults, but the faults are relatively minor, and those which in the opinion of the reviewer might deserve the reader's attention, apart from language or proofreading (which is lax in places), are those which stem from Siegel's apparent preoccupation with *not* being slick (in the bad modern sense as he clearly views it). But above all, these volumes are packed full of important standard results in the field, and this is fundamental in evaluating them.

And now for an analysis of the contents by the numbers.

Chapter 1, vol. I, is on elliptic functions and commences with a section on the very old result about doubling the arc of a lemniscate. This is a good place to start because it is elementary and gives a good notion of elliptic integrals and of a problem that is connected with the beginnings of complex multiplication. This is followed by a natural sequel on the Euler addition theorem. Then, in preparation for a broader treatment of elliptic functions and elliptic integrals, there follow sections on analytic continuation and Riemann regions or, as the reviewer may sometimes refer to them, Riemann surfaces. Particular attention is given to the Riemann surface of the square root of a quartic polynomial, which leads naturally into the subject of elliptic integrals of the first kind and to the