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Aspects of topology, by Charles O. Christenson and William L. Voxman, Pure and Applied Mathematics, Vol. 39, Marcel Dekker, Inc., New York and Basel, 1977, xi + 517 pp., \$ 19.75.

Set-theoretic topology: With emphasis on problems from the theory of coverings, zero dimensionality and cardinal invariants, by Gregory L. Naber, University Microfilms International, 1977, xv + 706 pp., \$ 37.25.

General topology is a subject which graduate students are usually expected to absorb an adequate amount of somewhere between calculus and graduate school. A working mathematician needs some intuitive feeling for at least its vocabulary: what open, closed, compact, and connected mean, what a metric is, what Tietze's extension theorem says. But the common denominator is quite small and one can take this minimal knowledge which ignores the forest of pathologies found in more abstract spaces and march right into a graduate course in algebraic topology and hardly feel a twinge of desire for a more thorough background. Special topics in general topology can perhaps be studied more easily at a time when one wishes to know more. Both set theory and general topology are vast subjects which have seen tremendous expansion in recent years. Mathematicians who frequently deal with uncountable sets, with families of sets of integers, with combinatorics of any kind, with nonseparable Banach spaces, with topological spaces which do not have a countable base, . . . , these mathematicians would do well to know of the recent development in set theory and perhaps general topology too! But the growth is so diverse and the really useful parts so technically set theoretic, that it is hard to keep the community aware, especially via general textbooks.

Recently we have seen large numbers of new beginning graduate texts in general topology. I'm not sure why. It is true that the available ones were out of date. But for the most part, these new texts have few recent theorems and little or no set theoretic technique. Still they concentrate on the abstract; there is minimal introduction to manifold theory.

The book of Christenson and Voxman is *not* one of these. It is a new beginning topology text; but the aim is to get you into geometric topology as fast as possible. The interest in abstract spaces, as opposed to subsets of the plane, is almost zero. To illustrate: the definitions of *Hausdorff* and *regular* are found on p. 117 immediately preceded by a rather thorough treatment of absolute neighborhood retracts and immediately followed by a gory-details-with-pictures proof of the Jordan curve and Schönflies theorems. I agree that nonnormal spaces are irrelevant here. On the other hand Moore spaces are discussed! The authors do not wish to slight a topic which is part of the traditional heritage of many geometric topologists. The book covers essentially those topics which might have been found in a course taught by R. H. Bing at Wisconsin ten years ago: the simplicial approximation theorem, the dunce's cap, the pictures of everything,

A basic principle of the book is: the best introduction to higher dimensional geometric topology is to really get one's hands dirty in dimension