Actually the group which characterizes Euclidean geometry includes "similarities" as well as these isometries (see Coxeter, H.S.M. "Introduction to Geometry", page 67).

The chief value of this book lies in the stimulation it gives the reader to explore the more advanced fields that the author mentions in the notes at the end of each chapter, such as projective geometry, hyperbolic and elliptic geometry, and group theoretic foundations of geometry.

C.W.L. Garner, Carleton University

An Introduction to Vector Analysis, by F. Max Stein. Harper and Row, New York and Evanston, 1963. xii + 209 pages.

This book is an introductory text in classical vector analysis. It contains the following chapters:

1. The Algebra of vectors. 2. The differential calculus of vectors. 3. Differential geometry, (introduction to the theory of curves and curvilinear coordinates). 4. Elementary theory of integration. 5,6,7. Introduction to theoretical mechanics.

The above materials are treated in an almost similar fashion as in all classical books of vector analysis written in the last fifty years. One should add that the presentation of the subject is very clear and well organized.

The book is suitable for students who have completed a first course in calculus and an introductory course on differential equations.

H.A. Eliopoulos, University of Windsor

Introduction to General Topology, by Z. Mamuzić. Translated from the first Serbo-Croatian edition by Leo F. Boron, P. Noordhoff, Ltd., Groningen, 1963. 159 pages. Price Dfl. 17.50.

This book is a good, concise survey of the various types of structures on a set that are considered in general topology and of the interconnections between them. As such, it is recommended to those mathematicians who are acquainted with the basic elements of general topology and who wish to learn about all the various ways that have been developed for introducing a topology into a set by means of some other type of structure.

In particular, it is to be noted that this is the first English

monograph containing an account of proximity spaces. The book is definitely not the place in which to learn the basic facts of general topology and hence the title is a misnomer.

After a detailed discussion of the definitional aspects of neighbourhood spaces and topological spaces, the author introduces continuity and the separation axioms and then concludes the first half of the book with a discussion of metric spaces and the metrization theorem of Smirnov-Nagata. The remainder is devoted to proximity spaces, uniform spaces and sets equipped with an abstract distance.

Proximity spaces (due to Efremovich) arose from axiomatization of the relation δ of closeness defined between subsets A and B in a metric space by setting A δ B if the distance between them is zero. The basic properties of proximity spaces are proved and Smirnov's theorem that a proximity space corresponds to a unique compactification of the underlying topological space is stated. Also stated are Smirnov's and Ramm-Shvarts characterization of those proximity relations that arise from metrics.

Uniform spaces in the sense of Bourbaki are introduced and the standard facts proved. After stating the metrization theorem for uniform spaces, the author gives the Tukey and Shvarts descriptions of uniform spaces and in terms of each of these discusses the connection between uniform spaces and proximity spaces. The reviewer feels that it would have been worthwhile to state the equivalence between uniform spaces and proximity spaces. This would have made it possible to reveal the connection between completion and the Smirnov compactification.

Finally, the author gives an account of the work of Kurepa, Papić, Frechet, Appert, Colmez and himself on the problem of defining a topology on a set by means of an abstract distance. Essentially this requires the replacement of the positive real numbers in the definition of a metric space by some other set equipped with varying types of structure. The details of the results are too technical to be mentioned in a review.

J. Taylor, McGill University

Introduction to functional analysis for scientists and technologists, by B.Z. Vulikh. Addison-Wesley and Pergamon Press (1963), Reading, Mass. $10.00.

This book is a translation of Vvedeniye v funktsional'nyi analiz published in the Soviet Union in 1958. According to one reviewer (S.H. Gould, Math. Reviews 21(1960), 2172), the original Russian