

of presentation, since in the long run it is more economical as far as "economy of thought" is concerned.

This book is divided into three chapters: Chapter I, Spaces, Chapter II, Transformations, and Chapter III, Orthogonality. There are also three appendices: on the classical canonical form, on the direct products, and on Hilbert space. This last appendix is just a short preview of what the reader will get into when he takes up further study.

The chapters are divided into sections, and this division was done with great care and didactical skill. The headings of the sections indicate by themselves the impressive variety of topics treated. These range from the relatively familiar ones like linear dependence (§§4, 5), linear manifolds (§9), or proper values of Hermitean and unitary transformations (§62), to those that are of a definitely less familiar and more difficult character like reflexivity of finite dimensional spaces (§15), polar decomposition (§67), or the ergodic theorem for unitary transformations (§76).

However, the reviewer doubts whether this book could be used successfully in a course on matrices and linear equations. The presentation is definitely that of an analyst and the "algebraic" point of view is purposely avoided. The author states in the preface that his purpose is ". . . to emphasize the simple geometric notions common to many parts of mathematics, and to do it in a language which gives away the trade secrets and tells the students what is in the back of the minds of people proving theorems about integral equations and Banach spaces."

The reviewer thinks that the author succeeded admirably in this respect.

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The non-singular cubic surfaces. By B. Segre. Oxford, The Clarendon Press, 1942. 11 + 180 pp. 63 figures. \$4.50.

The extensive literature on the cubic surface would hardly justify further additions unless such additions contributed a novel approach. The novelty of the approach in the case of the volume under review justifies its inclusion.

A non-singular cubic surface F and a triad of planes not belonging to a pencil form a pencil the surfaces of which remain non-singular in all the intermediate positions from F to the triad of planes. Under these circumstances the lines on the surface are always distinct and preserve their incidence relations, thus giving rise to the group.

The book is divided into four chapters devoted to (1) the discussion