

SHORTER NOTICES.

Géométrie, Premier et Second Cycle. Par EMILE BOREL.
Paris, Librairie Armand Colin, 1905. 383 pp.

THIS is one of a series of elementary text-books written by Borel to meet the demand caused by the recent activity for the improvement of instruction in elementary mathematics in France. As the author states, it has been his aim to make a book more in line with the ideas of the geometers and analysts of the nineteenth century who have taught that "Geometry is the study of groups of movements." With this end in view he has introduced the ideas of symmetry and displacements as often as possible, thereby making many demonstrations simpler and more concrete.

The book is divided into three parts. Part one contains about what is ordinarily called books I and II. The treatment however is quite distinctive. The theorems concerning isosceles triangles and parallel lines are proved by the use of symmetry. The symmetry of regular figures is discussed at some length. For use in constructions, the square is introduced as a third instrument and many constructions are thereby made much simpler. Part two is the extension of the first part to space. The ideas of translation and rotation are used quite freely. Part three treats similitude, areas and volumes. The trigonometric functions of the angle are given and used in the demonstration of many of the theorems which follow. The book closes with a short discussion of conics and a chapter devoted to the approximate determination of plane areas. A good collection of problems is given at the end of each part.

C. L. E. MOORE.

Orthogonale Axonometrie. Ein Lehrbuch zum Selbststudium.
Mit 29 Figurtafeln in besonderem Hefte. By Dr. RUDOLF
SCHÜSSLER, Associate Professor of Mathematics in the Tech-
nical School at Graz. Leipzig, Teubner, 1905. 170 pp.

IN this book the attempt has been made to develop axonometry as an independent method of representation without the use of the horizontal and vertical planes of descriptive geometry and without the assumption of any previous knowledge of conical or parallel perspective. The method of procedure is rather similar to that of Pelz* but made much more concrete and ele-

* See the Vienna *Sitzungsberichte*, vols. 81, 83, 90 and the Prague *Sitzungsberichte*, 1885, 1895.