work. A few omitted topics which ought to have been included are: polar coordinates in space (radius vector and direction cosines), cylindrical coordinates and the fundamentals of intrinsic geometry.

The text is well and carefully written and, within its field, is thorough. Pedagogical requirements are borne constantly in mind and the expository form is good. American teachers and authors will find it a useful work for reference.

CHARLES SISAM.

Essai philosophique sur les Probabilités. By Pierre-Simon Laplace. I, II. Paris, Gauthier-Villars, 1921. 12 + 104 + 108 pp.

Mémoire sur la Chaleur. By MM. Lavoisier et de Laplace. Paris, Gauthier-Villars, 1920. 78 pp.

Mémoires sur l'Électromagnétisme et l'Électrodynamique. By André-Marie Ampère. Paris, Gauthier-Villars, 1921. 14 + 112 pp.

The editor of this series of reprints, entitled *Les Maîtres de la Pensée Scientifique*, pertinently remarks that the rapid scientific advances of the present time tempt us to neglect past discoveries and their authors. This neglect is almost unavoidable whenever the original papers are not within reach of the mass of scientific students. Reprints in cheap form, like the above, should meet with a hearty welcome. It is a privilege to be able to carry around in one's coat pocket the masterpieces of Laplace, Lavoisier and Ampère. Surely there is no need of enlarging upon the commanding place which each of these memoirs occupies in the history of science.

FLORIAN CAJORI.

Gruppentheorie. By Dr. L. Baumgartner. Berlin, Walter de Gruyter & Co., 1921. 120 pp.

This little book is as interesting as it is handy. It is simply written and divided into sections in a helpful way. There are four chapters: Introduction to the Group Notion, The Group Notion in Geometry, The Finite Group, The Infinite Group. The third chapter is much the longest and perhaps the most unified.

There are many illustrative examples, from theory of functions, transformations, number theory, etc., the predominance being from geometry. The literature list (p. 5) is very brief; in English only Burnside's earlier book is mentioned. The name of Lagrange is applied to the theorem, The order of a subgroup of a finite group is a factor of the order of its group (p. 7), a misnomer we are now told.* Sylow's theorem is introduced (p. 98) but a proof is appropriately omitted. If one were using this book for a first study of groups, certainly many supplementary exercises would be desirable. The little volume closes with answers to its forty-nine exercises and a very useful index.

LOUIS C. MATHEWSON.

* Carmichael, R. D., this BULLETIN, (2), vol. 27 (1922), pp. 474, 475.