

SHORTER NOTICES

The Geometry of René Descartes, translated from the French and Latin by David Eugene Smith and Marcia L. Latham. With a facsimile of the first edition, 1637. Chicago and London, The Open Court Publishing Company, 1925. xiii+246 pp., with portrait. Price, \$4.

La Géométrie de René Descartes. Nouvelle Edition. (Avec portrait de Descartes d'après Frans Hals.) Paris, J. Hermann, 1927. Price, 21 francs.

It is indeed a healthy sign of the popular interest in the history of mathematics that so many publishers in European countries, and in America, are occupied with the reproduction of the classics of science. One can find few works more worthy of reproduction than this fundamental achievement of Descartes. In a very real sense modern mathematics begins with his analytic geometry. Also in a very real sense Descartes is the discoverer rather than the inventor of the work. We now can see that this work is the product of the varied developments of mathematics made in Europe before Descartes, particularly in Italy, in France, and in England, development of ideas which were based upon the work of the Greeks, the Hindus, and the Arabs. The contemporary and even more modern work by Fermat illustrates the fact that the ideas were "in the air." Fortunately both were Frenchmen.

The French edition of Descartes' Geometry is the second publication of this work in this form, although this fact is not stated in the publication. The first edition appeared in 1886, issued by the same publisher. The French edition unfortunately modernizes the terminology.

Two German editions have also appeared, translated by Ludwig Schlesinger. The first appeared in 1894 and sold for three marks sixty pfennigs which is again the price for the new edition of 1923, a noteworthy achievement. The French edition sells at 21 francs.

The American edition is far superior to the others mentioned in that it gives an exact facsimile of the text, with translation and notes. The price, four dollars, is just about five times that of a French or German edition.

The notes are, in general, adequate. The vital point that Descartes studiously avoids negative abscissas and ordinates does not receive treatment. Some of the notes, for example, note 49 on page 33, are actually misleading on this point. In recent publications Wieleitner has stressed this late complete recognition of the negative. Tropfke (*Geschichte der Elementar Mathematik*, vol. 6, Leipzig, 1924, p. 109) asserts that only with Newton in 1704 do the four quadrants receive equal recognition, and that most texts of the eighteenth century did not grasp it.

The English version can be highly commended to all students of mathematics, a fine rendition of a classic which will even today be a source of inspiration to lovers of mathematical science.

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