

## BOOK REVIEW

*A history of the conic sections and quadric surfaces.* By J. L. Coolidge. Oxford University Press, 1946. 11+214 pp. \$6.00.

Despite the wealth of the literature extant dealing with the conic sections, and the large amount of easily accessible material concerning the quadric surfaces, the extensive synopsis presented in this study by a distinguished geometer must be regarded as an altogether worthwhile endeavor. The connected account which the author gives of these loci, from the discovery of the conics by Menaechmus (pupil of Plato and Eudoxus) to the differential properties of quadric surfaces, makes this a book which both amateur and professional mathematicians will consult with pleasure and profit. The copious quotations from early writers which the book contains are interlarded with sprightly observations. Though the animated style employed is perhaps unusual in a serious historical study, it undoubtedly stimulates reader interest.

The first two chapters are devoted to the work of the Greeks. In the twelve hundred years from the time of Pappus to the beginning of the sixteenth century, there was apparently a complete loss of interest in the subject. The third chapter takes up the history with the re-awakening of interest evidenced by the work of Werner, Desargues, Pascal, and so on, and carries the account down to the great projective school, which is the subject of Chapter IV. Chapters V, VI, and VII deal with miscellaneous metrical theorems, systems of conics, and conics in space, respectively. They are followed by a chapter of six pages, concerning mechanical construction of conics, which completes the treatment of the conic sections.

The remaining fifty-five pages of the book are devoted to the quadric surfaces. The work is divided into four chapters, dealing with the synthetic, algebraic, higher algebraic, and differential methods.

The book is concluded with an excellent list of papers and books quoted in the text and an adequate subject index.

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