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Macaulay, Francis Sowerby I

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(b. Witney, England, 11 February 1862; d. Cambridge, England, 9 February 1937)

mathematics.

The son of a Methodist minister, Macaulay was educated at Kingswood School, Bath, a school for the sons of the Methodist clergy, and at St. John's College, Cambridge. After graduating with distinction, he taught mathematics for two years at Kingswood and, from 1885 to 1911, at [St. Paul's](#) School, London, where he worked with senior pupils who were preparing to enter a university. He was remarkably successful: two of his many pupils who became eminent mathematicians were G. N. Watson and J. E. Littlewood. In *A Mathematician's Miscellany*, Littlewood gives a vivid picture of Macaulay's methods: there was little formal instruction; students were directed to read widely but thoroughly, encouraged to be self-reliant, and inspired to look forward to pursuing research in mathematics.

In recognition of his own researches, which he had steadily carried on despite his heavy teaching responsibilities, in 1928 Macaulay was elected a fellow of the [Royal Society](#), a distinction very seldom attained by a schoolmaster. Apart from some elementary articles in the *Mathematical Gazette* and a school text on geometrical conics, he wrote some fourteen papers on [algebraic geometry](#) and a Cambridge tract on modular systems, otherwise polynomial ideals. The earlier papers concerned algebraic plane curves, their multiple points and intersections, and the Noether and Riemann-Rock theorems. This work led to later papers on the theory of algebraic polynomials and of modular systems. Much of this was pioneering work with an important influence on subsequent research in [algebraic geometry](#), and it was directed toward the construction of a firm and precise basis of algebra on which geometrical theorems could be safely erected.

BIBLIOGRAPHY

I. Original Works. Macaulay's books are *Geometrical Conics* (Cambridge, 1895); and *The Algebraic Theory of Modular Systems*, Cambridge Mathematical Tracts, no. 19 (Cambridge, 1916). A list of Macaulay's papers follows the obituary notice by H. F. Baker cited below.

II. Secondary Literature. See H. F. Baker's notice of Macaulay in *Journal of the London Mathematical Society*, **13** (1938), 157–160; and J. E. Littlewood, *A Mathematician's Miscellany* (London, 1953), 66–83 - the paragraphs relevant to Macaulay are quoted in Baker's notice.

T. A. A. Broadbent