

SECOND PUBLIC EXAMINATION

Honour School of Mathematical Sciences: Paper O1

HISTORY OF MATHEMATICS

Reading Course Hilary Term 2025:

**The Introduction of Differential Notation into Britain**

Candidates should write an essay of 3000 words using the following as a guide.

Up to 10% variation in length is permissible.

The bibliography is not included in the word count.

**Essay to be submitted by 12 noon on Monday 24th March 2025 (HT, week 10)**

**The Introduction of Differential Notation into Britain**

Compare and contrast some aspects of the increasing use of differential notation — and hence of Leibnizian calculus — in Britain in the early 19th-century. You should give particular attention to Robert Woodhouse's *The Principles of Analytical Calculation* (1803) and to the writings of the Cambridge Analytical Society, but also include mention of any other texts that you deem relevant. It is *suggested* that your essay focus on three or four of the following aspects of these works. This list is offered for guidance only and should not inhibit your own ideas.

- (1) The motivation for these works and the contexts within which they appeared.
- (2) The authors' conceptualisations of the differential calculus, including the terminologies and notations used.
- (3) The technical content of the works.
- (4) The manner in which the works were published and received.
- (5) The impact of the texts on later mathematicians and students of mathematics.

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