

SECOND PUBLIC EXAMINATION

Honour School of Mathematical Sciences: Paper O1

HISTORY OF MATHEMATICS

Reading Course Hilary Term 2026:

The quest for Fermat's Last Theorem

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 Tuesday 24th March 2026 (HT, week 10)

The quest for Fermat's Last Theorem

Compare and contrast the efforts of PIERRE DE FERMAT, LEONHARD EULER, SOPHIE GERMAIN, and ERNST EDUARD KUMMER to prove Fermat's Last Theorem. You may also mention any other authors whom you deem relevant. Use these to discuss the place of the theorem within the wider development of mathematics. It is *suggested* that your essay focus on three or four of the following aspects of the works of these authors. 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' views on number theory as a branch of mathematics.
- (3) The technical content of the works, including the terminologies and notations used.
- (4) The manner in which the works were published and received.
- (5) The impact of the texts on later mathematicians.

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