

SECOND PUBLIC EXAMINATION

Honour School of Mathematical Sciences: Paper BO1.1

HISTORY OF MATHEMATICS

Reading Course Hilary Term 2024:

Georg Cantor, the infinite, and the origins of set theory

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 18th March 2024 (HT week 10)

Georg Cantor, the infinite, and the origins of set theory

Discuss the context, content, and significance of Cantor's development of set theory. It is *suggested* that your essay focus on three or four of the following points, but note that this list is offered for guidance only and should not inhibit your own ideas.

- (1) The motivation for Cantor's work and the context within which it appeared.
- (2) The terminology and concepts employed — in particular, Cantor's notion of a set.
- (3) The technical content of the work.
- (4) The manner in which the work was published and received.
- (5) The influence of Cantor's set theory both on contemporaries and on later mathematicians.

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