

Examiners' Report: Final Honour School of Mathematics & Philosophy Part B Trinity Term 2022

November 30, 2022

Part I

A. Statistics

- **Numbers and percentages in each class.**

See Table 1, page 1.

Table 1: Numbers in each class

	Number					Percentages %				
	2022	(2021)	(2020)	(2019)	(2018)	2022	(2021)	(2020)	(2019)	(2018)
I	6	(6)	(8)	(4)	(6)	37.5	(42.86)	(50)	(30.77)	(50)
II.1	8	(9)	(5)	(8)	(5)	50	(57.14)	(31.25)	(61.54)	(41.67)
II.2	2	(0)	(3)	(1)	(2)	12.5	(0)	(18.75)	(7.69)	(8.33)
III	0	(0)	(0)	(0)	(0)	0	(0)	(0)	(0)	(0)
P	0	(0)	(0)	(0)	(0)	0	(0)	(0)	(0)	(0)
F	0	(0)	(0)	(0)	(0)	0	(0)	(0)	(0)	(0)
Total	16	(15)	(16)	(13)	(13)	100	(100)	(100)	(100)	(100)

- **Numbers of vivas and effects of vivas on classes of result.**

Not applicable.

- **Marking of scripts.**

All Philosophy scripts, essays and theses are double-marked, after which the two markers consult in order to agree a mark between them. If the two markers are unable after discussion to agree a mark, the mark is decided by a third marker, within the range of the two initial marks. All Mathematics scripts were, as is the normal practice, single-marked according to carefully checked model solutions and a pre-defined marking scheme closely adhered to. A comprehensive independent checking procedure is also followed. (See the Mathematics Part B report for details). BEE extended essays and coursework for BO1.1 History of Mathematics were double-marked.

B. New examining methods and procedures in the 2022 examinations

In light of the unusual circumstances in which this year's candidates for Part B had been taught and examined up to this point, a special committee was formed to consider how their mathematics examinations should be arranged. Its recommendation, made in September 2021, was that candidates should be permitted to bring a "summary sheet" with them into each of their examination. Candidates were thus permitted to use both sides of a sheet of A4 paper to This consisted of both sides of a sheet of A4 paper on which candidates could record whatever notes they wished on, and were free to consult this sheet while taking that paper. This had consequences both for the nature of questions that were set, and for the experience of in-person examinations that candidates had, but it is difficult to know what, if any, affect it had on results of the examination.

C. Changes in examining methods and procedures currently under discussion or contemplated for the future

There were a number of typographical errors in mathematics examination papers which caused complications in assessing the work of candidates who offered those papers. In almost all of these errors, the correction required should have been evident to anyone with a basic knowledge of the material, but given that candidates should feel able to assume that their examination questions are correctly posed, even very able candidates could have spent time second-guessing their assessment that a question was posed incorrectly.

Had it been possible, as has previously been the case, for the assessor who wrote the paper (or someone with suitable knowledge of the subject acting as their deputy) to be present at the start of these examinations, it is likely that all of these errors would have been corrected, either by the assessor spotting the error themselves, or in response to a query from a candidate. It is unfortunate that the University currently does not permit this safety-net for errors which are more likely to occur in papers for technical subjects such as mathematics.

Unlike in previous years, the examinations this year did not have general provisions in place as a result of the pandemic, but its impact was nevertheless noticeable in some cases through MCE applications.

D. Notice of examination conventions for candidates

The first Notice to Candidates was issued on 30 March 2022 and the second notice on 27 May 2022.

All notices and the examination conventions for 2022 are online at <http://www.maths.ox.ac.uk/members/students/undergraduate-courses/examinations-assessments>.

Part II

A. General Comments on the Examination

The examiners are very grateful all who contributed to the setting, administering and assessing of this year's Part B examinations. They would like to thank in particular James Knight in the Philosophy Faculty, and Elle Styler, Waldemar Schlackow, Charlotte Turner-Smith, and the rest of the academic administration team in the Mathematical Institute for the energy, dedication and good humour they contributed to all stages in the examination process.

The internal examiners are grateful to the external examiners Prof. John Hunton (Mathematics) and Prof. Karim Thebault (Philosophy) for generously performing their special roles in this process.

B. Equality and Diversity issues and breakdown of the results by gender

Table 2, page 3 shows percentages of male and female candidates for each class of the degree. The number of candidates is small enough that it would not be meaningful to examine the variation in the performance of men and women in this cohort.

Table 2: Breakdown of results by gender

Class	Number								
	2022			2021			2020		
	Female	Male	Total	Female	Male	Total	Female	Male	Total
I	0	1	1	6	2	8	6	2	8
II.1	3	4	7	5	4	9	8	3	11
II.2	2	0	2	0	1	1	2	0	2
III	0	0	0	0	0	0	0	0	0
P	0	0	0	0	0	0	0	0	0
Total	5	5	10	11	7	18	16	5	21
Class	Percentage								
	2022			2021			2020		
	Female	Male	Total	Female	Male	Total	Female	Male	Total
I	0	20	10	54.54	28.57	44.44	37.5	40	38.10
II.1	60	80	70	45.45	57.14	50	50	60	52.24
II.2	40	0	20	0	14.29	5.56	12.5	0	9.52
III	0	0	0	0	0	0	0	0	0
P	0	0	0	0	0	0	0	0	0
Total	100	100	100	100	100	100	100	100	100

C. Detailed numbers on candidates' performance in each part of the exam

See Table 3, page 4 for the number of candidates taking each Mathematics paper, together with statistics for the raw marks (average and standard deviation), and USMs (average and standard deviation) attained on each paper by this cohort. It should be noted that the total raw marks for a unit are 50 whilst the USMs are scaled to a maximum of 100. In accordance with University guidelines, statistics are not given for papers where the number of candidates was five or fewer.

Table 3: Statistics by paper (Mathematics papers)

Paper	Number of Candidates	AvgRaw	StdevRaw	Avg USM	StdevUSM
B1.1	16	37.62	8.96	73.5	14.14
B1.2	16	31.62	8.52	65	9.19

See Table 4, page 4 for the number of candidates taking each Philosophy paper, together with statistics for the USMs (average and standard deviation) attained on each paper by this cohort. In accordance with University guidelines, statistics are not given for papers where the number of candidates was five or fewer.

Table 4: Statistics by paper (Philosophy papers)

Paper	Number of Candidates	Avg USM	StDev USM
102 Knowledge and Reality	11	66.09	7.13
122 Philosophy of Mathematics	16	64	7.03
127 Philosophical Logic	9	61.33	23.67

D: Comments on papers and individual questions

See reports from Mathematics Examiners and from Philosophy Examiners.

E. Names of members of the Board of Examiners

Prof. Kevin McGerty

Dr Alexander Paseau

Prof. Peter Millican

Prof. John Hunton (external) Prof. Karim Thebault (external)