BO1 History of Mathematics
Lecture I
Introduction
Part 1: Admin

MT 2020 Week 1

Contact details

Chris Hollings
christopher[dot]hollings[at]maths[dot]ox[dot]ac[dot]uk

Course webpage:
https://courses.maths.ox.ac.uk/node/49179

Summary

Part 1
- ► Arrangements: lectures, classes, the nature of the course
- ► Some advice on reading and taking notes

Part 2
- ► The nature of history
- ► How can we organise/break down the history of mathematics?
- ► Rough overview of the course

Part 3
- ► The ancient roots of mathematics

Administrative matters, MT

▶ Lectures: to be released online week by week
(lecture slides to be posted online week by week)

▶ Classes: to be held online in weeks 3, 5, 6, 7
[SUBJECT TO CONFIRMATION]

▶ Work: a short essay (1,000 words) and preparation of a
discussion topic for each class. Essays to be submitted
electronically [DETAILS TO FOLLOW]

▶ Sheets: details of weekly reading, and of essay and discussion
topics, can be found on course webpage

▶ Assessment: written paper in TT 2021

Administrative matters, HT

Topic: Tracing the meanings of 'analysis'

- ▶ A reading course with 'seminars' in weeks 1–8

- ▶ In-depth study of original works by Oughtred, Newton, and Euler

- ▶ Two or three essays of 2,000 words each, and preparation of a discussion topic for each class

- ▶ Assessment: 3,000-word essay, topic revealed in week 7, to be submitted by 12noon on Monday, week 10

Advice on taking notes and writing essays

▶ See the notes on the O1 course webpage

▶ Pay particular attention to the sections on
  ▶ citing sources,
  ▶ bibliographies, and
  ▶ plagiarism

▶ The importance of clear and accurate citations will be stressed throughout the course — these serve the same purpose as proofs in mathematical arguments

Taking notes

From reading:

- ▶ *background* reading is for information, not examination: it is important, but don't spend too long on it
- ▶ read the material (at least) twice
  - ▶ on the first reading, try to get a general feel for the material, its meaning and significance
  - ▶ on the second, take notes (see the online guidance)

From lectures:

- ▶ Don't try to take down every detail
- ▶ Instead, read ahead, listen, think, prepare questions to ask later

The lectures and the reading will cover some of the same ground but are designed to be complementary

Recommended reading: the main texts

Jacqueline Stedall, *Mathematics emerging: a sourcebook 1540–1900*, Oxford University Press, 2008 [available via SOLO]

and *either*

Victor Katz, *The history of mathematics: brief version*, Pearson, 2003

or

Victor Katz, *A history of mathematics: an introduction*, 3rd edition, Addison-Wesley, 2009

(College libraries may have earlier editions of the latter, but these do not differ significantly in content as far as this course is concerned.)

Recommended reading: other useful books

Jacqueline Stedall, *The history of mathematics: a very short introduction*, Oxford University Press, 2012 [available via SOLO]

Benjamin Wardhaugh, *How to read historical mathematics*, Princeton University Press, 2010 [available via SOLO]

John Fauvel and Jeremy Gray, *The history of mathematics: a reader*, Macmillan/Open University, 1987

June Barrow-Green, Jeremy Gray and Robin Wilson, *The history of mathematics: a source-based approach*, vol. 1, MAA Press, 2019

Further books (usually on specific topics) will be cited throughout the course

Recommended reading: other useful resources

Some biographical resources:

(Complete) Dictionary of Scientific Biography (*DSB*): available via SOLO

Oxford Dictionary of National Biography (*ODNB*): available via SOLO

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There are many other general histories of mathematics available — you are encouraged to read widely, but please read critically