

BO1.1. History of Mathematics

Sheet 4 — MT24

Preliminaries

Reading for weeks 7 and 8:

- Stedall, Chapters 6 and 17
- Katz, Sections 14.4, 19.1–19.3, 21.4, 22.3 and 24.2*

(On matrices, linear equations, and vector spaces, number theory, and non-Euclidean geometry.)

*Principally the material on Bolyai, Lobachevsky, and their work.

Essay to be submitted ahead of the class in week 7:

Read the extract from Cauchy's 1826 paper on the calculus of residues (*Mathematics emerging*, §15.2.3). Explain its context, point out the most important aspects of its content, and assess its significance. (1,000 words)

Discussion topic to be prepared for the class in week 7:

What is algebra? We have seen the subject go through several incarnations, but is there a common thread that runs throughout? If so, what is it? If not, how can we justify the use of the same name for different subjects?