# BO1.1. History of Mathematics

## Sheet 4 — MT20

## Preliminaries

**Reading for weeks 7 and 8:**

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| | Stedall | Chapters 6, 17 |
| and *either* | Katz (brief) | Sections 10.4, 14.1, 16.4, 19.1,* 20.1 |
| *or* | Katz (1st/2nd ed.) | Sections 11.4, 15.5, 16.4, 17.2* |
| *or* | Katz (3rd ed.) | Sections 14.4, 21.4, 22.4, 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?


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