

BO1.1. History of Mathematics

Sheet 3 — MT25

Reading for weeks 5 and 6:

- Stedall, Chapters 12–14, 16 and 18
- Katz, Sections 14.1, 19.1, 19.2, 21.1–21.3, 22.1 and 22.2

(On the theory of equations, and the origins of abstract algebra, derivatives and integrals, real analysis, mathematical rigour, and the foundations of mathematics.)

Essay to be submitted by 12 noon on Monday of week 6:

Read the extract from Cayley's first paper on group theory (1854) (*Mathematics emerging*, §13.1.4). Explain its context, point out the most important aspects of its content, and assess its significance. (1,000 words)

Discussion topics to be prepared for the class in week 6:

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?