

TOPICS FOR MATHEMATICS 153, SPRING 2016

References are to sections of Burton, *The History of Mathematics: An Introduction* (Seventh Ed.).
In many cases, there will also be material not covered in Burton.

I. Ancient mathematics

0. Introduction and general information (Burton, Preface)
1. Mathematics in the earliest civilizations (Burton, 1.1–1.3, 2.2–2.5)
2. Greek mathematics before Euclid (Burton, 3.1–3.4, 10.1)
3. Euclid and the *Elements* (Burton, 4.1–4.3)
4. Alexandrian mathematics after Euclid — I, II, III (Burton, 4.1–4.5)
5. The late Greek period (Burton, 5.1–5.4)

II. The transitional period

6. Mathematics of Asian and Arabic civilizations — I, II (Burton, 5.3, 5.5, 6.1)
7. Mathematical revival in Western Europe (Burton, 6.2–6.4, 7.1)
8. Mathematics in the late Middle Ages (Burton, 7.1–7.2)
9. Mathematics in the sixteenth century (Burton, 7.2–7.4, 8.1)
10. Mathematics and the beginnings of modern science (Burton, 8.1)

III. Calculus and subsequent developments

11. Precalculus mathematics in the seventeenth century (Burton, 8.1–8.2)
12. The development of calculus (Burton, 8.3–8.4)
14. Calculus after Newton and Leibniz (Burton, 9.3, 10.2, 11.3)