Reading

- Borwein[2], "On the history of the calculation of π".
- Stillwell, Chapter 4, Chapter 9.

Exercises

Stillwell

- 4.4.1, 4.4.2, 4.4.3 (method of exhaustion applied to the hyperbola)
- 9.2.1, 9.2.2 (area underneath x^n)
- 9.2.4, 9.2.5 (the sphere in the cylinder)
- 9.3.1, 9.3.2, 9.3.4 (finding tangents)
- 9.5.3, 9.5.4 (binomial series and $\sin^{-1}$)

Borwein[2]

Exercise 4.

Hints: For the first part, complete the square and make a trig substitution (or use the arcsin integral). For the second part, use Newton's binomial series on page 169 of Stillwell and then integrate term-by-term.

For Newton to compute π to 15 digits, how many terms of the series would he have needed?