Exercise 1. *The title of Section 8.4 mentions* Arithmetica Infinitorum. *What was* Arithmetica Infinitorum?

Exercise 2. *How did Wallis compute $\int_0^1 x^{1/3}\,dx$? Carry out the calculation.*

Exercise 3. *Repeat Wallis' infinite product formula for $\frac{\pi}{4}$.*

Exercise 4 (8.4.1). *Use the identity $\sin x = 2\sin(x/2)\cos(x/2)$ to show that*

$$\frac{\sin x}{2^n \sin(x/2^n)} = \cos\frac{x}{2}\cos\frac{x}{2^2}\cdots\cos\frac{x}{2^n}$$

whence

$$\frac{\sin x}{x} = \cos\frac{x}{2}\cos\frac{x}{2^2}\cos\frac{x}{2^3}\cdots.$$

Exercise 5 (8.4.2). *Deduce Viète's product by substituting $x = \pi/2$.*