Math 1120 Homework Assignment 6

Due week of March 9, 2018

You should do the problems from the book first and check your answers to be sure you understand the methods. You are responsible to do all problems. Hand-in starred problems only.

§8.7 2, 3, 5*, 9, 12, 13, 20, 24*, 37*

Other problems:

A* We know $\pi = 4 \tan^{-1}(1) = 4 \int_{0}^{1} \frac{1}{1+x^2} \, dx$. Use the Trapezoidal rule and Simpson’s rule to approximate the integral with $n = 6$. What estimates for $\pi$ do you obtain?

B* Use the error estimate for the Trapezoidal rule to give a bound for the error in problem A for the Trapezoidal rule.