MA/PHY506 Fall 2012
Problem Set 5
DUE: 2 November 2012

1. Arfken, Chapter 8, page 393–394: problems 8.3.1, 8.3.2.

2. Arfken, Chapter 8, pages 394, problem 8.3.4. Find the weight function of the equation on $[0, \infty)$. What boundary conditions are needed to make the differential operator hermitian on the positive half-line?

3. Arfken, Chapter 5, page 273: problem 5.2.1. Just construct the first three polynomials.