

**AM 35: Homework # 7 (Due Nov 10)**

The book we refer to is Boyce & DiPrima, *Elementary Differential Equations and Boundary Value Problems* (7th Edition).

- Read Sections 3.6, 3.7.
- Solve problem (Section 3.6) 1, 2, 7 (you might want to read example 4 in section 3.6 first), 15.
- Solve problem (section 3.7) 15, 30, 21, 22.
- Find the solution to the following initial value problem

$$y'' + 4y' + 5y = g(t), \quad y(0) = 0, \quad y'(0) = 1$$

for any function  $g(t)$ . You may leave the answer in the form of definite integrals. (*Hint*: use the result from problems 21, 22 that you just did.)