

MST 352/652
Homework #11

Due Date: April 16, 2019

1 Problems for everyone

1. pg. 240-241, #6.2.1, #6.2.10-6.2.14.
2. Find the Green's function for the following boundary value problem on \mathbb{R} :

$$u'' - u = f(x), \quad \lim_{x \rightarrow -\infty} u(x) = 0, \quad \lim_{x \rightarrow \infty} u(x) = 0.$$

2 Graduate Problems

1. Find the Green's function for the following boundary value problem:

$$\begin{aligned} u''''(x) &= f(x) \\ u(0) &= u(1) = 0 \\ u'(0) &= u'(1) = 0. \end{aligned}$$