

Homework 5A

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MATH 241-910 :Calculus IV

June 6, 2017

Problem 0. Reading: section 5.1-5.4 in Haberman. *Optional reading:* section 5.5-5.6 in Haberman

Problem 1. (*Change equation to Sturm-Liouville form*) Haberman 5.3.3

Problem 2. (*Rayleigh quotient and eigenvalue problem*)
Haberman 5.3.8

Problem 3. (*more on eigenvalue problem*) Haberman 5.3.9

Optional exercise: Below are exercise proposed in class and some additional problems. These are for your own benefit and may be helpful for your understanding of the material. It is not required to turn them in. It is suggested that you at least read those problems.

Problem A. Haberman 5.3.2

Due: June 5 (World environment day), 2017, in class