MATH 241 — HOMEWORK 5.

due on Friday, February 17.

by Richard Haberman

Topics:
• Chapter 2. Method of Separation of Variables
  – 2.5 Laplace’s Equation: Solutions and Qualitative Properties
    * (2.5.1) Laplace’s Equation Inside a Rectangle
    * (2.5.2) Laplace’s Equation Inside a Circular Disk
    * (2.5.4) Qualitative Properties of Laplaces Equation
• Chapter 3. Fourier Series
  – 3.1 Introduction
  – 3.2 Statement of Convergence Theorem
  – 3.3 Fourier Cosine and Sine Series
  – 3.4 Term by Term Differentiation of Fourier Series
  – 3.5 Term by Term Integration of Fourier Series
  – 3.6 Complex Form of Fourier Series

Fifth Homework Assignment.

Reading:
• Read Sections 3.1, 3.2, 3.3 and 3.6 from the book.
• Read your notes.

Exercises: Problems:
• Page 92: problems: 3.2.1, 3.2.2
• Page 110: problems: 3.3.1, 3.3.2, 3.3.10, 3.3.18
• Page 120: problems: 3.4.5
• Page 129: problems: 3.6.1