

Homework Assignment #6

Due Friday, May 13, but I will also accept it in class upon my return on Monday May 16.

Professor Atwood will cover the lectures for me on May 9 and May 13. His office is next door to mine in case you have questions outside of class related to the material on Fourier series. You are also welcome to send questions to me by email.

Reminder: the second midterm exam is on Wednesday, May 11. It will cover Section 10.6, all of Chapter 12, and Section 14.1.

1. 14.3, Problems 2, 3, and 4. Some derivations related to the orthogonality of eigenfunctions of Sturm-Liouville problems.
2. 14.4-1. Fourier expansion of a continuous function.
3. 14.4-11. Fourier expansion of a discontinuous function.
4. 15.1-15. Fourier series for a periodic triangle.
5. 15.1-20. Showing that the integrals for the Fourier coefficients can be taken over any interval that encompasses a full period.
6. 15.1-25. Showing the equivalence between the normal and complex forms of the Fourier series.