

Homework 6 - Math 142, Frank Thorne (thorne@math.sc.edu)

Due Wednesday, October 9

Important: Please show your work, write in complete sentences, draw pictures when appropriate, and explain your reasoning clearly.

- (a) Thomas, Chapter 10.2: 2, 3, 8, 9, 19, 36, 49-58.
- (b) What is the n th term test for convergence? Why does it work?
- (c) What is the Integral Test for convergence? Why does it work, and what are its hypotheses? Draw two pictures and explain thoroughly.
- (d) Thomas, Chapter 10.3, 3, 4, 5, 20-32.

For #3, draw two pictures illustrating your use of the Integral Test. For the remaining problems, you are not required to draw pictures (but you should know how!)

For 20-32, the convergence tests from Chapters 10.2 and 10.3 will suffice to solve all the problems, and you are also welcome to use convergence tests from later sections if you want.