

Homework 10 - Math 142, Frank Thorne (thornef@mailbox.sc.edu)

Due Monday, November 10

- (a) Read Chapter 18 of Thompson. Its title is ‘integrating as the reverse of differentiating’. Summarize the chapter, with particular attention to how Thompson is addressing the topic of his title.
- (b) What is the comparison test? Explain why it works.
- (c) What is the limit comparison test? Explain (roughly) why it works.
- (d) 11.4, 3-16. For those series which converge in problems 3-10, determine an explicit upper bound for the value of the series.
- (e) 11.5, 2-6, 23-30, 32, 33.

Additional problems: 11.4, 17-22, 11.5, 7-12 (subject to same instructions as above)

Bonus: Which of the convergence tests we have studied so far do you believe is best for which kind of integrals? Explain thoroughly.