

Homework 7 - Math 431

Due Mar 19th

Instructor Mauro Maggioni
Office 319 Gross Hall
Office hours 1:30-2:30pm
Web page www.math.duke.edu/~mauro/teaching.html

Reading: from Reed's textbook: study sections 3.5,3.6, in their entirety, paying attention to both the theorems and the examples.

Problems:

§3.3: #3,8,10,13,14

§3.5: #4

§3.6: #9

Additional Problems

Which of the following improper Riemann integrals exist?

- $\int_0^{+\infty} \frac{e^{-x}}{2\sqrt{x}}$
- $\int_{-\infty}^{+\infty} \frac{x}{2} dx$
- $\int_{-\infty}^{+\infty} \frac{1}{1+x^3} dx$