

# Problem set 10: More integration, intro to sequences of functions

Math 521 Section 001, UW-Madison, Spring 2024

April 17, 2024

Please solve the following problems in a clear, complete, and concise manner. You are welcome to work together, but your write-up must be your own. Use of outside internet resources is prohibited.

*Due on paper at the beginning of class on **Wednesday, April 24th**.* Please be sure to staple your writeup.

1. Let  $p > 0$ . Prove that if  $\int_a^b |f|^p d\alpha = 0$  then  $\int_a^b |f| d\alpha = 0$ .
2. Rudin 6.12,15,16
3. Rudin 7.1,3,4,5.
4. (Extra credit +1) Rudin 6.10.