

HOMWORK ASSIGNMENTS 245C, SPRING 2019

WILFRID GANGBO

We refer to exercises from the book *Real Analysis*, by G. B. Folland. Only homeworks marked * will be collected and a subset of them be graded. However, we suggest that you work all exercises of this assignment.

1. DUE APRIL 15

Section 6.4. Exercise 35; Exercise 36*; Exercise 37*; Exercise 38*; Exercise 40.

2. DUE APRIL 29

Section 6.5. Exercise 41*; Exercise 42; Exercise 44;

Exercise 45*: here you may rather show that T_α is weak type $(1, q)$ where $q = n/\alpha$. You also may rather show that T_α is strong type (p, r) where $r^{-1} + 1 = p^{-1} + n^{-1}\alpha$.

Section 8.1. Exercise 1; Exercise 2; Exercise 4*.

3. DUE MAY 15

Section 8.2. Exercise 5; Exercise 7; Exercise 8*; Exercise 9*.

Section 8.3. Exercise 12; Exercise 13; Exercise 14*; Exercise 18.

DEPARTMENT OF MATHEMATICS, UCLA, LOS ANGELES, CA 90095
E-mail address: wgangbo@math.ucla.edu