

MATH 431/531 FALL 2021
HOMEWORK 6
DUE NOVEMBER 5, 2021.
INSTRUCTOR: ROBERT LIPSHITZ

Remark. Since there's a midterm Monday, this homework is due Friday instead of Wednesday. Feel free to turn it in early, though...

Problems:

- (1) Prove Lee, Proposition 3.11(c,d,e).
- (2) Prove Lee, Proposition 3.31(c,d,f).
- (3) Prove Lee, Proposition 3.42(a,c,e).
- (4) Lee, Problem 3-2.
- (5) Lee, Problem 3-7.

Challenge problems (required for Math 531, optional for 431):

- (6) Lee, Problem 3-6. (This criterion for Hausdorffness is important.)
- (7) Lee, Problem 3-8.

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