

Homework 3 - Due Wed. Mar. 7th
Introduction to Harmonic Analysis and its Applications

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Homework Policies

As in Homework 1.

Assignment

Study Chapter 7 Section 1 in Stein and Shakarchi's book, about discrete Fourier analysis.

Exercises

Exercise 1 (50pts). Exercise 3 from chapter 5 part (a) in Stein and Shakarchi's book, on how decay of the Fourier transform implies Hölder regularity.

Exercise 2 (50pts). Exercise 16 from chapter 5 part (a) in Stein and Shakarchi's book, on Dirichlet kernel on \mathbb{R} and its periodization being the Dirichlet kernel on \mathcal{S}^1 .