

HOMEWORK 6

Due on Friday, November 4th, in class.

Exercise 1. (40 points) Solve exercises 14.1, 14.3, 14.4, and 14.12 from the textbook.

Exercise 2. (30 points) Solve exercises 15.1, 15.3, and 15.6 from the textbook. *Do not use the integral test; use instead the dyadic criterion covered in class.*

Exercise 3. (30 points) Study the convergence of the series

$$\sum_{n \geq 2} \frac{n^{\ln n}}{(\ln n)^n} \quad \text{and} \quad \sum_{n \geq 2} \frac{1}{(\ln n)^{\ln n}}.$$