

## HOMEWORK 6

Due on Friday, November 6th, in class.

**Exercise 1.** (20 points) Solve exercises 14.1, 14.3, 14.4, and 14.12 from the textbook.

**Exercise 2.** (15 points) Solve exercises 15.1, 15.3, and 15.6 from the textbook.

**Exercise 3.** (15 points) Solve exercises 17.2, 17.9, and 17.10 from the textbook.

**Exercise 4.** (40 points) Solve exercises 17.11, 17.12, 17.13, and 17.14 from the textbook.

**Exercise 5.** (10 points) Study the convergence of the series

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