Assignment 9

Deadline: April 10, 2019.

Hand in: 9.1 no 11 and 13. 9.2. no. 3cd, 4e, 7bc, 17, 19.

Section 9.1: 8, 9, 10, 11, 13

Section 9.2: 1(ac), 2(bcd), 3(cde), 4(bce), 6, 7(abc), 8, 17, 19, 20. You should do all problems in this section.

Supplementary Exercises

1. Consider $\sum_{n=1}^{\infty} a_n$ and let $\sum_{n=1}^{\infty} b_n$ and $\sum_{n=1}^{\infty} c_n$ where $b_n = a_n^+$ and $c_n = a_n^-$ (so $a_n = a_n^+ - a_n^-$). Show that $\sum_{n=1}^{\infty} b_n$ and $\sum_{n=1}^{\infty} c_n$ both are divergent to infinity when $\sum_{n=1}^{\infty} a_n$ is conditionally convergent.
2. Show that every conditionally convergent series admits a rearrangement which is divergent to infinity.