

Part I: Reading (due at the beginning of class Monday, April 8)

On the green Absolute and Conditional Convergence handout, read the top half of page 3, stopping at “Idea of Test” and also read Theorem 3 on page 5. You don’t need to be prepared to turn anything in, just be ready to ask questions about these things and use them.

Part II: Exercises (prepare for class Monday, April 8)

Examples 2 and 3 (assume the Alternating Series Test; we’ll work through the idea of the proof in class Monday) on the green Absolute and Conditional Convergence handout.

Part III: Homework Problems (due Wednesday, April 10 at the beginning of class)

1. Decide whether each of the following series converges or diverges using whatever method is effective (if the convergence can be classified as either absolute or conditional, include that information, too). Make sure to explain which convergence test you use.

(a)
$$\sum_{n=1}^{\infty} \frac{(-1)^n n}{\sqrt{n^2 + 1}}$$

(b)
$$\sum_{n=1}^{\infty} \frac{\sin n}{2^n}$$

(c)
$$\sum_{n=1}^{\infty} n e^{-n^2}$$

Reminder: Celebration of Learning # 3 on Wednesday, April 10

You may bring a hand-written notecard with you to the Celebration of Learning (you can use both sides or bring two one-sided cards).