

MATH 131: Calculus II, Section 2

Due: Wednesday, November 14, 2018 at the beginning of class

Response Section

1. State Theorem 8.8: The Divergence Test.
2.
 - (a) What does the “important note” say after the statement of the theorem?
 - (b) What CAN we use Theorem 8.8 to tell us?
3.
 - (a) What is the Harmonic Series?
 - (b) State Theorem 8.9 about the Harmonic Series.
 - (c) Does Theorem 8.9 contradict Theorem 8.8? Why or why not?

4. State Theorem 8.10: The Integral Test.

5. Suppose $a_k = f(k)$ for all positive integers k , that is, the terms of the sequence agree with the function f on all the positive integers. If $\int_1^{\infty} f(x)dx$ is convergent to 7, can we say that $\sum_{k=1}^{\infty} a_k$ converges to 7 as well? Why or why not? (Hint: Check out Figure 8.28 as well as the text!)

6. State Theorem 8.11: Convergence of the p -Series.

7. Try Exercise 33 from Section 8.4 on page 638. Explain your answer briefly.

8. State Theorem 8.13: Properties of Convergent Series.

Questions/Overview Section

9. Write down any **questions** you have on the reading. Be as specific as possible! See the salmon homework guidelines handout for details.

Reflection Section

10. Write **two or three** sentences reflecting on the process of your work so far in the course. See the salmon homework guidelines handout for details.

Time Section

11. How much time did you spend on this reading assignment? _____