Section 10.3: Infinite Series

MATH 131: Calculus II Your Name (Print): _____

Course Section Number: _____ Due: Friday, November 8, 2019 at the beginning of class

After reading Section 10.3 (pages 662-667 in the text), respond to the following questions **on this handout**. Be sure to staple your pages together before turning it in if they are not double sided. **You must answer all parts to all questions to earn full credit!!! Also, use FULL SENTENCES to answer questions that require words.** See the salmon homework guidelines handout for details.

Response Section

1. State the definition of a geometric sum. (This definition is within the text, not in its own box. Write the whole sentence with geometric sum in bold.)

2. State Theorem 10.7 about the convergence and divergence of geometric series. Include the diagram.

3. Consider the series $\sum_{k=0}^{\infty} \left(\frac{4}{3}\right)^k$.

   (a) Is this a geometric series? If so, define what a and r are. If not, explain why not.

   (b) Does the series converge or diverge? Explain and if it converges, state what it converges to.

4. Consider the series $\sum_{k=0}^{\infty} \left(-\frac{3}{4}\right)^k$.

(a) Is this a geometric series? If so, define what a and r are. If not, explain why not.

(b) Does the series converge or diverge? Explain and if it converges, state what it converges to.

5. The textbook doesn't give an explicit definition of a telescoping series. Looking at Example 3, explain what a telescoping series is. Where does it's name come from?

Questions/Exercise Section

9. Write down at least two questions you have on the reading. OR if you have NO questions, do exercise 56 in Section 10.3 (page 669). Be sure to show all steps for full credit! See the salmon homework guidelines handout for details.

Reflection Section

10. Write **two or three** sentences reflecting on the progress 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? _____