

Section 9.2: Approximating Functions with Polynomials

MATH 131: Calculus II, Section 2

Name (Print): _____

The last required reading assignment!!!

Due: Friday, December 7, 2018 at the beginning of class

After reading Section 9.2 (pages 675-682 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 power series together with the definition of the coefficients, the center, the interval of convergence and the radius of convergence of the series.

2. Write out the first four terms of a power series centered at 9 with coefficients $c_0 = 2$, $c_1 = 4$, $c_2 = 6$, and $c_3 = 8$.

3. State Theorem 9.3: Convergence of Power Series.

4. State Theorem 9.4: Combining Power Series.

5. State Theorem 9.5: Differentiating and Integrating Power Series.

6. Do the interval and radius of convergence of the power series change when the series is differentiated or integrated? Explain carefully.

Questions/Overview Section

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

Reflection Section

7. 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

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