Name: _____ Period: _____

Chapter 9 Syllabus –Sequences and Series

- Do all of your homework problems….Make sure you TRY all of them!
- Check all of your answers.
- After you have checked your answers, ASK questions on the problems you can't figure out.
- BEFORE test get any additional help needed on concepts not mastered.

NP = Not Proficient **P = Proficient** **M = Mastery**

Section	Learning Target	Homework Questions	Self-Evaluation		
8-1	I can define a sequence (arithmetic or geometric) with a formula (recursive or explicit). I can graph a sequence I can find the limit of a sequence	pg 441 # 2, 3, 6, 7, 9, 11, 13, 15-17, 23, 25, 27, 31, 33-35, 37-39, 44-54	NP	P	M
9-1 day 1	I can find the sum of a geometric series (finite or infinite) I can use a limit of a sequence of partial sums to find the sum of an infinite series I can determine if a simple infinite series converges or diverges. I can use the nth term test for divergence to determine if an infinite series diverges.	pg 481 # 1-20, 35, 48, 66-68	NP	P	M
9-1 day 2	I can use the integral test to determine whether an infinite series converges or diverges I can use the p-test to determine whether an infinite p-series converges or diverges I can identify and understand the properties of the Harmonic Series.	Integral and P-Test Worksheet	NP	P	M
9-1 day 3	I can use the direct comparison test to determine whether an infinite series converges or diverges I can use the limit comparison test to determine whether an infinite series converges or diverges	Direct Comparison and Limit Comparison Test Worksheet	NP	P	M

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9-1 day 4	I can use the alternating series test to determine whether an infinite alternating series converges or diverges I can use the alternating series remainder to approximate the sum of an alternating series I can classify an convergent alternating series as absolutely or conditionally convergent	Alternating Series Worksheet	NP	P	M
9-1 day 5	I can use the ratio test to determine whether an infinite series converges or diverges I can use the root test to determine whether an infinite series converges or diverges	Ratio and Root Test Worksheet	NP	P	M
9-1 day 6	I can use any of the convergence or divergence test to determine whether an infinite series converges or diverges	pg 511 #29-43 pg 523 #7-22	NP	P	M
9-1 day 7	I can identify the function that a power series models I can write a power series that models a given function I can use integration and differentiation to determine the power series of a function given the power series of another function I can determine the radius and interval of convergence of a power series	pg 481 #21-34, 69-71	NP	P	M
9-2	I can construct a Taylor (or MacLaurin) series that models a given function Given the Taylor Series for a function(s), I can write the Taylor series for a other functions that are compositions or products of those function.	pg 492 #1-3, 5, 7, 8, 10, 13, 14, 22, 24-26, 31, 36-42	NP	P	M
9-4/9-5	I can determine the radius and interval of convergence of a Taylor (or MacLaurin) series I can determine the convergence at an endpoint of an interval of convergence for a Taylor or(or MacLaurin) series.	pg 511 #8, 9, 11, 14, 16-18, 49, 52, 55-60 pg 523 #55, 56, 66, 68-70	NP	P	M

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9-3 day 1	I can use a Taylor polynomial to approximate the value of a function at a given point. I can use the Lagrange error bound to determine the error associated with using a Taylor (or MacLaurin) polynomial to make an approximation.	pg 500 #1-5 (find error), 22, 23, 33, 39-41, 43	NP	P	M
9-3 day 2	I can determine the number of terms needed in a Taylor (or MacLaurin) polynomial that are needed to get the desired accuracy in making an approximation.	pg 500 #11-14, 19, 42	NP	P	M
Review	I can do AP Free Response Questions of the form: 1.) Taylor or MacLaurin Series 2.) Power Series	pg 526 #1, 4, 5, 7, 11, 12, 23, 24, 28, 30, 32, 35, 37, 39-48, 53-59, 71-73	NP	P	M