

**Chapter 9 (Unit 9) Test**

**Date:** \_\_\_\_\_

**Self-Reflection for Studying for Test**

Check off your answer to each question:

	Yes	Somewhat	No
Did you complete all HW?			
Did you correct any HW errors and complete any missing problems?			
Did you attend study groups every week?			
Did you ask questions in your study group on topics?			
Did you correct any Quiz errors?			

Rate your preparation for each of these topics on a scale of 0 to 5, where 0 is not at all prepared and 5 is well-prepared.

If you are not well-prepared for a topic, identify what can help you prepare for the Test (i.e., your notes, homework, mathkanection, Khan Academy, or other resources)

<b>Topic</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>What to do to be better prepared</b>
<p><i>Understand the concept of series as a sequence of partial sums as converging or diverging with motivating examples</i></p> <p>I can find the sum of the first n terms of series as a partial sum.</p> <p>I can apply the partial sum of a series to find the sum of a series.</p>							
<p><i>Determine whether a series converges or diverges</i></p> <p>I can recognize a geometric series and determine where the geometric series converges to or if the geometric series diverges.</p> <p>I can apply the nth term test to determine divergence of a series.</p> <p>I can use the integral test, direct comparison test, limit comparison test, p-series test, ratio test, or alternating series test to determine if a series converges.</p>							
<p><i>Determine whether a series converges absolutely or conditionally or diverges.</i></p> <p>I can determine if a series is absolutely convergent, conditionally convergent, or divergent.</p>							
<p><i>Determine the radius of convergence and the interval of convergence for a power series</i></p> <p>I can find that a power series converges at a single point or on an interval of convergence.</p> <p>I can use the ratio test to determine the radius of convergence of a power series.</p> <p>I can test both endpoints of the open interval to determine the interval of convergence of a series.</p>							

Topic	0	1	2	3	4	5	What to do to be better prepared
<p><i>Represent a function at a point as a Taylor Polynomial, Taylor Series, or Maclaurin Series</i></p> <p>I can write a function as a Taylor Series centered at <math>x = a</math> or a Maclaurin Series centered at <math>x = 0</math>.</p> <p>I can approximate a function's value of <math>f</math> near <math>x = a</math> using a Taylor Polynomial for a function <math>f</math> centered at <math>x = a</math>.</p> <p>I can construct functions using the Maclaurin series for <math>\sin x</math>, <math>\cos x</math>, <math>\frac{1}{1-x}</math>, <math>\frac{1}{1+x}</math>, <math>e^x</math>, <math>\ln(1+x)</math>, or <math>\tan^{-1} x</math>.</p> <p>I can use a known series to differentiate or integrate term-by-term to create a given function.</p>							
<p><i>Determine the error bound associated with a series.</i></p> <p>I can use the LaGrange error bound to determine a maximum interval for the error of a Taylor polynomial approximation to a function.</p> <p>I can use the alternating series error bound to determine how far a partial sum is from the value of the infinite series.</p>							