

Calculus BC Schedule -- Chapter 8

L'Hopital's Rule and Improper Integrals

<u>Date</u>	<u>Lesson</u>	<u>HW Assignment</u>
12-Feb	8.2 L'Hôpital's Rule	HW2--p.450 #1-7,13-25odd
15-Feb	NO SCHOOL --President's Day	NO Additional Homework
16-Feb	8.2 L'Hôpital's Rule	HW3--p.450 #33,37,39,53 Video on Improper Integrals
17-Feb	8.4 Improper Integrals	HW4--p.467 #1,3,5,13,17,Video on More Improper Integrals
18-Feb	8.4 Improper Integrals	HW5--p.467 #25,29,35,51,Video on Comparison Test
19-Feb	8.4 Improper Integrals	HW6--p.467 #31,32,41,43, Study for Test
22-Feb	Chapter 8 Review Quick M/C Quiz for Unit 8	Study for Test
23-Feb	NO SCHOOL --Teacher Institute Day	NO Additional Homework
24-Feb	Chapter 8 Test	HW1--Video on Power Series

Unit 8: L'Hôpital's Rule and Improper Integrals

LIM-4
L'Hospital's Rule allows us to determine the limits of some indeterminate forms.

LEARNING OBJECTIVE	ESSENTIAL KNOWLEDGE
LIM-4.A Determine limits of functions that result in indeterminate forms.	LIM-4.A.1 When the ratio of two functions tends to $\frac{0}{0}$ or $\frac{\infty}{\infty}$ in the limit, such forms are said to be indeterminate. EXCLUSION STATEMENT <i>There are many other indeterminate forms, such as $\infty - \infty$, for example, but these will not be assessed on either the AP Calculus AB or BC Exam. However, teachers may include these topics, if time permits.</i>
	LIM-4.A.2 Limits of the indeterminate forms $\frac{0}{0}$ or $\frac{\infty}{\infty}$ may be evaluated using L'Hospital's Rule.

LIM-6
The use of limits allows us to show that the areas of unbounded regions may be finite.

LEARNING OBJECTIVE	ESSENTIAL KNOWLEDGE
LIM-6.A Evaluate an improper integral or determine that the integral diverges. BC ONLY	LIM-6.A.1 An improper integral is an integral that has one or both limits infinite or has an integrand that is unbounded in the interval of integration. BC ONLY LIM-6.A.2 Improper integrals can be determined using limits of definite integrals. BC ONLY