

Calculus BC Schedule -- Unit 8

L'Hopital's Rule and Improper Integrals

	Monday	Tuesday	Wednesday	Thursday	Friday
Week 20				<i>30-Jan</i>	<i>31-Jan</i>
Lesson				4.4 Indeterminate Forms & L'Hôpital's Rule	4.4 Indeterminate Forms & L'Hôpital's Rule
HMWK				HW1 --p.299 #7,9,27,29,34,37,43,45,47, AP Practice #1,8	HW2 --p.299 #35,39,40,41,49,50,51, AP Practice #2,7
Week 21	<i>3-Feb</i>	<i>4-Feb</i>	<i>5-Feb</i>	<i>6-Feb</i>	<i>7-Feb</i>
Lesson	6.12 Improper Integrals	1/2 DAY 6.12 Improper Integrals	6.12 Improper Integrals	<i>Unit 8 Review</i>	Unit 8 TEST
HMWK	HW3 --p.523 #1,2,15,17,18,22,72,79, AP Practice #3	HW4 --p.523 #25,29,31,39,80, AP Practice #5	HW5 --p.523 #5,6,63,65,66,67,71 AP Practice #1	STUDY for TEST!!!	Khan Academy: Review of Geometric Series

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L'Hopital's Rule and Improper Integrals

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
<p>LIM-4.A Determine limits of functions that result in indeterminate forms.</p>	<p>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.</p> <p>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></p> <p>LIM-4.A.2 Limits of the indeterminate forms $\frac{0}{0}$ or $\frac{\infty}{\infty}$ may be evaluated using L'Hospital's Rule.</p>

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

LEARNING OBJECTIVE	ESSENTIAL KNOWLEDGE
<p>LIM-6.A Evaluate an improper integral or determine that the integral diverges. BC ONLY</p>	<p>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.</p> <p>BC ONLY</p> <p>LIM-6.A.2 Improper integrals can be determined using limits of definite integrals. BC ONLY</p>