

## Calculus BC Schedule -- Unit 8

### L'Hopital's Rule and Improper Integrals

	Monday	Tuesday	Wednesday	Thursday	Friday
<b>Week 20</b>					<i>30-Jan</i>
<b>Lesson</b>					4.4 Indeterminate Forms & L'Hôpital's Rule
<b>HMWK</b>					<b>HW1</b> --p.321 #7,9,27,29,34,37,43,45,47, AP Practice #1,8
<b>Week 21</b>	<i>2-Feb</i>	<i>3-Feb</i>	<i>4-Feb</i>	<i>5-Feb</i>	<i>6-Feb</i>
<b>Lesson</b>	6.9 Improper Integrals	6.9 Improper Integrals	<b>EARLY DISMISSAL</b> 4.4 Indeterminate Forms & L'Hôpital's Rule	6.9 Improper Integrals	<i>Unit 8 Review</i>
<b>HMWK</b>	<b>HW2</b> --p.546 #1,2,15,17,18,22,72,79, AP Practice #3	<b>HW3</b> --p.546 #25,29,31,39,80, AP Practice #5	<b>HW4</b> --p.321 #35,39,40,41,49,50,51, AP Practice #2,7	<b>HW5</b> --p.546 #5,6,63,65,66,67,71 AP Practice #1	<b>STUDY for TEST!!!</b>
<b>Week 22</b>	<i>9-Feb</i>				
<b>Lesson</b>	<b>Unit 8 TEST</b>				
<b>HMWK</b>	Khan Academy: Review of Geometric Series				

# Calculus BC Schedule -- Unit 8

## 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><b>LIM-4.A</b> Determine limits of functions that result in indeterminate forms.</p>	<p><b>LIM-4.A.1</b> When the ratio of two functions tends to <math>\frac{0}{0}</math> or <math>\frac{\infty}{\infty}</math> in the limit, such forms are said to be indeterminate.</p> <p><b>EXCLUSION STATEMENT</b> <i>There are many other indeterminate forms, such as <math>\infty - \infty</math>, 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><b>LIM-4.A.2</b> Limits of the indeterminate forms <math>\frac{0}{0}</math> or <math>\frac{\infty}{\infty}</math> 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><b>LIM-6.A</b> Evaluate an improper integral or determine that the integral diverges. <b>BC ONLY</b></p>	<p><b>LIM-6.A.1</b> 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><b>BC ONLY</b></p> <p><b>LIM-6.A.2</b> Improper integrals can be determined using limits of definite integrals. <b>BC ONLY</b></p>