

AP Calculus BC: Limits and Continuity

K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal
															MM
District Objective Apply learned objectives from previous courses to solve review problems involving functions including: domain and range, graphing, intercepts, symmetry, slope, points of intersection, distance, notation, composition, even/odd, zeros, and transformations.												PASS Process Standard All		Quarter I No. Days 3	
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input type="radio"/> PLAN <input type="radio"/> ACT <input type="radio"/> AP															
PASS Objective The student will...													NCTM Standard Pgs. 334-364		
Text Correlation						Rating			Additional Resources						
Assessment															

AP Calculus BC: Limits and Continuity

K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal
												I			M
District Objective Apply the informal definition of a limit to one- and two-sided limits.												PASS Process Standard I A II A, C	Quarter I No. Days 1/2		
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input type="radio"/> PLAN <input type="radio"/> ACT <input checked="" type="radio"/> AP															
PASS Objective The student will...													NCTM Standard Pgs. 305-306 Pgs. 334-364		
Text Correlation Pages 51-69						Rating 1		Additional Resources Graphing Calculator MAA - Pgs. 37-42 Barron's - Pgs. 22-41							
Assessment The graph of the function f is shown in the figure below. Which of the following statements about f is true?															
(a) $\lim_{x \rightarrow a} f(x) = \lim_{x \rightarrow b} f(x)$ (b) $\lim_{x \rightarrow a} f(x) = 2$ (c) $\lim_{x \rightarrow b} f(x) = 2$ (d) $\lim_{x \rightarrow b} f(x) = 1$ (e) $\lim_{x \rightarrow a} f(x)$ does not exist.															

AP Calculus BC: Limits and Continuity

K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal												
												I			M												
District Objective Know and apply the properties of limits.												PASS Process Standard 1 A, B III C		Quarter I No. Days $\frac{1}{2}$													
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input type="radio"/> PLAN <input type="radio"/> ACT <input checked="" type="radio"/> AP																											
PASS Objective The student will...													NCTM Standard Pgs. 334-364														
Text Correlation Pg. 56					Rating 1		Additional Resources MAA - Pgs. 37-42 Barron's - Pgs. 22-41																				
Assessment The graphs of the functions f and g are given below. <p>Determine whether the following limits exist. If they do, then find the limit.</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 33%;">a. $\lim_{x \rightarrow -1} f(x)$</td> <td style="width: 33%;">b. $\lim_{x \rightarrow 1} f(x)$</td> <td style="width: 33%;">c. $\lim_{x \rightarrow -1} g(x)$</td> </tr> <tr> <td>d. $\lim_{x \rightarrow 1} g(x)$</td> <td>e. $\lim_{x \rightarrow -1} f(x) + g(x)$</td> <td>f. $\lim_{x \rightarrow 0} 2f(x) + 3g(x)$</td> </tr> <tr> <td>g. $\lim_{x \rightarrow -1} f(x)g(x)$</td> <td>h. $\lim_{x \rightarrow 2} f(x)g(x)$</td> <td>i. $\lim_{x \rightarrow 0} \frac{f(x)}{g(x)}$</td> </tr> <tr> <td>j. $\lim_{x \rightarrow 0} \frac{g(x)}{f(x)}$</td> <td>k. $\lim_{x \rightarrow -2} g(f(x))$</td> <td>l. $\lim_{x \rightarrow -1} f(g(x))$</td> </tr> </table>																a. $\lim_{x \rightarrow -1} f(x)$	b. $\lim_{x \rightarrow 1} f(x)$	c. $\lim_{x \rightarrow -1} g(x)$	d. $\lim_{x \rightarrow 1} g(x)$	e. $\lim_{x \rightarrow -1} f(x) + g(x)$	f. $\lim_{x \rightarrow 0} 2f(x) + 3g(x)$	g. $\lim_{x \rightarrow -1} f(x)g(x)$	h. $\lim_{x \rightarrow 2} f(x)g(x)$	i. $\lim_{x \rightarrow 0} \frac{f(x)}{g(x)}$	j. $\lim_{x \rightarrow 0} \frac{g(x)}{f(x)}$	k. $\lim_{x \rightarrow -2} g(f(x))$	l. $\lim_{x \rightarrow -1} f(g(x))$
a. $\lim_{x \rightarrow -1} f(x)$	b. $\lim_{x \rightarrow 1} f(x)$	c. $\lim_{x \rightarrow -1} g(x)$																									
d. $\lim_{x \rightarrow 1} g(x)$	e. $\lim_{x \rightarrow -1} f(x) + g(x)$	f. $\lim_{x \rightarrow 0} 2f(x) + 3g(x)$																									
g. $\lim_{x \rightarrow -1} f(x)g(x)$	h. $\lim_{x \rightarrow 2} f(x)g(x)$	i. $\lim_{x \rightarrow 0} \frac{f(x)}{g(x)}$																									
j. $\lim_{x \rightarrow 0} \frac{g(x)}{f(x)}$	k. $\lim_{x \rightarrow -2} g(f(x))$	l. $\lim_{x \rightarrow -1} f(g(x))$																									

AP Calculus BC: Limits and Continuity																
K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal	
												I			M	
District Objective Find finite limits graphically, numerically, and analytically using direct substitution, cancellation technique, and rationalization technique (including trigonometric, special, and piecewise functions).												PASS Process Standard I A, B II A, B, C III C V B		Quarter I No. Days 3		
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input type="radio"/> PLAN <input type="radio"/> ACT <input checked="" type="radio"/> AP																
PASS Objective The student will...													NCTM Standard Pgs. 334-364			
Text Correlation Pgs. 56-63						Rating 2		Additional Resources Graphing Calculator MAA - Pgs. 37-42 Barron's - Pgs. 22-41								
Assessment If $a \neq 0$, then $\lim_{x \rightarrow a} \frac{x^2 - a^2}{x^4 - a^4}$ is:																
(a) $\frac{1}{a^2}$ (b) $\frac{1}{2a^2}$ (c) $\frac{1}{6a^2}$ (d) 0 (e) nonexistent																

AP Calculus BC: Limits and Continuity

K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal
															M

District Objective Find limits using L'Hôpital's Rule.	PASS Process Standard I A, B II A, B III C	Quarter I No. Days 1
------------------------------------------------------------------	------------------------------------------------------------	---------------------------------------------

ITBS
 CRT
 EXPLORE
 EOI
 PLAN
 ACT
 AP

PASS Objective The student will...	NCTM Standard Pgs. 334-364
----------------------------------------------	--------------------------------------

Text Correlation Pgs. 524-529	Rating 1	Additional Resources Barron's - Pgs. 61-63
-----------------------------------------	--------------------	------------------------------------------------------

Assessment

$$\lim_{h \rightarrow 0} \frac{e^h - 1}{2h}$$
 is

(a) 0 (b) $\frac{1}{2}$ (c) 1 (d) e (e) nonexistent

AP Calculus BC: Limits and Continuity

K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal
												I			M
District Objective Find infinite limits and discuss these limits in relation to the end behavior of a function.												PASS Process Standard I A, B II A, B V B	Quarter I No. Days 1/2		
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input type="radio"/> PLAN <input type="radio"/> ACT <input checked="" type="radio"/> AP															
PASS Objective The student will...													NCTM Standard Pgs. 297-298 Pgs. 334-364		
Text Correlation Pgs. 79-83	Rating 1	Additional Resources Graphing Calculator MAA - Pgs. 37-42 Barron's - Pgs. 22-41 http://archives.math.utk.edu/visual.caclulus/1/horizontal.4/index.htm <u>1</u>													
Assessment $\lim_{x \rightarrow 1} \frac{x}{\ln x}$ is: (a) 0 (b) $\frac{1}{e}$ (c) 1 (d) e (e) nonexistent															

AP Calculus BC: Limits and Continuity

K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal
												I			M
District Objective Identify limits that fail to exist.												PASS Process Standard I A, B II C	Quarter I No. Days 1/2		
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input type="radio"/> PLAN <input type="radio"/> ACT <input checked="" type="radio"/> AP															
PASS Objective The student will...													NCTM Standard Pgs. 334-364		
Text Correlation Pgs. 69-75				Rating 1		Additional Resources Graphing Calculator MAA - Pgs. 37-42 Barron's - Pgs. 22-41									
Assessment															
<p>If $f(x) = \begin{cases} \ln x & \text{for } 0 < x \leq 2 \\ x^2 \ln 2 & \text{for } 2 < x \leq 4, \end{cases}$ then $\lim_{x \rightarrow 2} f(x)$ is:</p> <p>(a) $\ln 2$ (b) $\ln 8$ (c) $\ln 16$ (d) 4 (e) nonexistent</p>															
AP Calculus BC: Limits and Continuity															

K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal
											I	E			M
District Objective Use limits to determine that asymptotic behavior of a function including horizontal, vertical, and slant asymptotes.												PASS Process Standard I A, B II A, C		Quarter I No. Days 1	
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input type="radio"/> PLAN <input type="radio"/> ACT <input checked="" type="radio"/> AP															
PASS Objective The student will...													NCTM Standard Pgs. 297-298 Pgs. 334-364		
Text Correlation Pgs. 187-192								Rating 2		Additional Resources Graphing Calculator Barron's - Pgs. 22-41					
Assessment Find all horizontal asymptotes for $f(x) = \frac{5x}{\sqrt{x^2 + 3}}$. (a) $y = 0$ (b) $y = \pm 5$ (c) $y = 5$ (d) $y = \pm 1$ (e) none of these Answer: (b)															
AP Calculus BC: Limits and Continuity															

K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal	
															M	
District Objective Use limits to compare relative magnitudes of functions and their rates of change.												PASS Process Standard II C III B IV D	Quarter I No. Days 1/2			
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input type="radio"/> PLAN <input type="radio"/> ACT <input checked="" type="radio"/> AP																
PASS Objective The student will...													NCTM Standard Pgs. 305-306 Pgs. 334-364			
Text Correlation Pgs. 79-83								Rating 2	Additional Resources Graphing Calculator Stressed Out: Slope as Rate of Change Activity							
Assessment Match the statements on the right with the graphs on the left. <ul style="list-style-type: none"> (a) The function is decreasing at a constant rate. (b) The function is increasing and its increases are getting larger. (c) The function is decreasing; its decreases are getting smaller. (d) The rate of change of the function is 0. (e) The function is increasing but its increases are getting smaller. (f) The function is increasing at a constant rate. (g) The function is decreasing and its decreases are getting larger. 																
AP Calculus BC: Limits and Continuity																

K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal
															M
District Objective Identify and apply the definition of continuity to determine continuity at a point and identify points of discontinuity.												PASS Process Standard II B, C III A		Quarter I No. Days 1	
○ ITBS ○ CRT ○ EXPLORE ○ EOI ○ PLAN ○ ACT ● AP															
PASS Objective The student will...														NCTM Standard Pgs. 334-364	
Text Correlation Pg. 67				Rating 1		Additional Resources Graphing Calculator; MAA - Pgs. 37-42; Barron's - Pgs. 22-41; Mudd Math Facts: Continuous but Nowhere Differentiable Activity									
Assessment Let f be defined as follows, where $a \neq 0$. $f(x) = \begin{cases} x^2 - a^2, & \text{for } x \neq a, \\ \frac{1}{x-a}, & \text{for } x = a. \end{cases}$ Which of the following are true about f ? I. $\lim_{x \rightarrow a} f(x)$ exists. II. $f(a)$ exists. III. $f(x)$ is continuous at $x = a$. (a) None (b) I only (c) II only (d) I and II only (e) I, II, and III															
AP Calculus BC: Limits and Continuity															

K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal
															M
District Objective Determine continuity on open and closed intervals.												PASS Process Standard I A, B III A		Quarter I No. Days 1/2	
○ ITBS ○ CRT ○ EXPLORE ○ EOI ○ PLAN ○ ACT ● AP															
PASS Objective The student will...														NCTM Standard Pgs. 297-298 Pgs. 334-364	
Text Correlation Pgs. 67-70								Rating 1		Additional Resources Graphing Calculator MAA - Pgs. 37-42 Barron's - Pgs. 22-41 http://archives.math.utk/visual.calculus/					
Assessment Which of the following statements is <i>not</i> true of $f(x) = \sqrt{x^2 - 49}$? <p>(a) f is continuous on the interval $(-\infty, -7]$.</p> <p>(b) f is continuous at $x = 14$.</p> <p>(c) f is continuous on the interval $[-7, 7]$.</p> <p>(d) f is continuous on the interval $[7, \infty)$</p> <p>(e) None of these.</p> <p>Answer: (c)</p>															

AP Calculus BC: Limits and Continuity

K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal
															M
District Objective Know and apply the properties of continuity.												PASS Process Standard I A, B		Quarter I No. Days 1	
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input type="radio"/> PLAN <input type="radio"/> ACT <input checked="" type="radio"/> AP															
PASS Objective The student will...														NCTM Standard Pgs. 334-364	
Text Correlation Pg. 72								Rating 1		Additional Resources Graphing Calculator MAA - Pgs. 37-42 Barron's - Pgs. 22-41 http://www.math.hmc.edu/calculus/tutorials/continuity/					
Assessment Let the function f be defined by $f(x) = x^2 \sin \frac{1}{x} \quad (x \neq 0)$ $f(0) = 0.$ (a) Prove that f is continuous at $x = 0$. (b) Prove that $f'(0)$ exists, and find it by using the definition of the derivative. (c) Prove that f' is <i>not</i> continuous at $x = 0$.															
AP Calculus BC: Limits and Continuity															

K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal
															M
District Objective Apply the Intermediate and Extreme Value Theorems.												PASS Process Standard III B, C, D		Quarter I No. Days 1	
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input type="radio"/> PLAN <input type="radio"/> ACT <input checked="" type="radio"/> AP															
PASS Objective The student will...													NCTM Standard Pgs. 334-364		
Text Correlation Pg. 74								Rating 1		Additional Resources Graphing Calculator Barron's - Pgs. 23-36 Extreme Values Activity					
Assessment															
<p>Use a graphing utility to graph $f(x) = x^3 - 2x - 5$.</p> <p>Then use the graph to find the interval for which the Intermediate Value Theorem guarantees the existence of at least one number c in that interval for which $f(c) = 0$.</p> <p>(a) $[-1, 1]$ (b) $[1, 2]$ (c) $[2, 3]$ (d) $[3, 4]$ (e) none of these</p> <p>Answer: (c)</p>															

AP Calculus BC: Derivatives

K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal
															M

District Objective Know and apply the formal definition and alternate form of the formal definition to determine basic derivatives, equations of tangent lines, local linearity, differentiability and continuity.										PASS Process Standard I A, B II C V C			Quarter I No. Days 4		
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input type="radio"/> PLAN <input type="radio"/> ACT <input checked="" type="radio"/> AP															
PASS Objective The student will...													NCTM Standard Pgs. 334-364		
Text Correlation Pgs. 91-98, 125				Rating 1		Additional Resources Graphing Calculator; Local Linearity Activity; MAA - Pgs. 28-30									
Assessment <p>Let f be a function such that $\lim_{h \rightarrow 0} \frac{f(2+h) - f(2)}{h} = 5$.</p> <p>Which of the following must be true?</p> <p>I. f is continuous at $x = 2$.</p> <p>II. f is differentiable at $x = 2$.</p> <p>III. The derivative of f is continuous at $x = 2$.</p> <p>(a) I only</p> <p>(b) II only</p> <p>(c) I and II only</p> <p>(d) I and III only</p> <p>(e) II and III only</p>															

<h2>AP Calculus BC: Derivatives</h2>

K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal
															M
District Objective Know and apply the basic rules of differentiation including the constant multiply power, sum and difference, product and quotient rules.												PASS Process Standard I A, B III D V C	Quarter I No. Days 3		
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input type="radio"/> PLAN <input type="radio"/> ACT <input checked="" type="radio"/> AP															
PASS Objective The student will...													NCTM Standard Pgs. 300-302 Pgs. 334-364		
Text Correlation Pg. 114-120				Rating 1		Additional Resources MAA - Pgs. 43-45 Complete the Differentiation Table Activity									
Assessment 1. If $f(x) = x^{\frac{3}{2}}$, then $f'(4) =$ (a) -6 (b) -3 (c) 3 (d) 6 (e) 8															
AP Calculus BC: Derivatives															

K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal	
															M	
District Objective Apply the chain rule of derivatives.												PASS Process Standard I A, B III D V C	Quarter I No. Days 2			
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input type="radio"/> PLAN <input type="radio"/> ACT <input checked="" type="radio"/> AP																
PASS Objective The student will...													NCTM Standard Pgs. 300-302 Pgs. 334-364			
Text Correlation Pg. 124								Rating 1	Additional Resources MAA - Pg. 47 Chain Rule Activity							
Assessment If $f(x) = x\sqrt{2x-3}$, then $f'(x) =$																
(a) $\frac{3x-3}{\sqrt{2x-3}}$ (b) $\frac{x}{\sqrt{2x-3}}$ (c) $\frac{1}{\sqrt{2x-3}}$																
(d) $\frac{-x+3}{\sqrt{2x-3}}$ (e) $\frac{5x-6}{2\sqrt{2x-3}}$																
AP Calculus BC: Derivatives																

K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal
											I	E			M
District Objective Communicate the concept of a derivative in terms of slope, local linearity, and instantaneous and average rate of change.												PASS Process Standard I A, B II A, B, C III A IV A, C, D V B	Quarter I No. Days 1		
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input type="radio"/> PLAN <input type="radio"/> ACT <input checked="" type="radio"/> AP															
PASS Objective The student will...													NCTM Standard Pgs. 334-364		
Text Correlation Pgs. 141-145				Rating 1		Additional Resources Graphing Calculator MAA - Pgs. 28-29 Designing a Speedometer Activity									
Assessment What is the instantaneous rate of change at $x = 2$ of the function f given by $f(x) = \frac{x^2 - 2}{x - 1} ?$ <p>(a) -2 (b) $\frac{1}{6}$ (c) $\frac{1}{2}$ (d) 2 (e) 6</p>															
AP Calculus BC: Derivatives															

K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal	
															M	
District Objective Know and apply the rules of differentiation for trigonometric functions.												PASS Process Standard I A, B III C	Quarter I No. Days 1			
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input type="radio"/> PLAN <input type="radio"/> ACT <input checked="" type="radio"/> AP																
PASS Objective The student will...														NCTM Standard Pgs. 300-302 Pgs. 334-364		
Text Correlation Pg. 118								Rating 1	Additional Resources MAA - Pgs. 49-50 www.cut-the-knot.com/Curriculum/Calculus							
Assessment $\frac{d}{dx} \cos^2(x^3) =$ <p>(a) $6x^2 \sin(x^3) \cos(x^3)$ (b) $6x^2 \cos(x^3)$ (c) $\sin^2(x^3)$</p> <p>(d) $-6x^2 \sin(x^3) \cos(x^3)$ (e) $-2 \sin(x^3) \cos(x^3)$</p>																
AP Calculus BC: Derivatives																

K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal
															M
District Objective Determine the derivative of parametric, polar, and vector-valued functions												PASS Process Standard I A I B	Quarter I No. Days 3		
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input type="radio"/> PLAN <input type="radio"/> ACT <input checked="" type="radio"/> AP															
PASS Objective The student will...													NCTM Standard Pgs. 300-302 Pgs. 334-364		
Text Correlation Pgs. 662-663 Pgs. 675-676 Pgs. 777-780								Rating 1	Additional Resources						
Assessment If $x = t^2$ and $y = \ln e^2 + 1$, then at $t = 1$, $\frac{d^2y}{dx^2}$ is (a) $-\frac{1}{4}$ (b) $-\frac{1}{2}$ (c) -1 (d) 0 (e) $\frac{1}{4}$															
AP Calculus BC: Derivatives															

K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal	
															M	
District Objective Determine higher order derivatives.												PASS Process Standard I A, B III A, C	Quarter I No. Days 1			
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input type="radio"/> PLAN <input type="radio"/> ACT <input checked="" type="radio"/> AP																
PASS Objective The student will...													NCTM Standard Pgs. 300-302 Pgs. 334-364			
Text Correlation Pg. 138								Rating 1	Additional Resources							
Assessment <p>If $x^2 + y^2 = 25$, what is the value of $\frac{d^2y}{dx^2}$ at the point (4, 3) ?</p> <p>(a) $-\frac{25}{27}$ (b) $-\frac{7}{27}$ (c) $\frac{7}{27}$ (d) $\frac{3}{4}$ (e) $\frac{25}{27}$</p>																
AP Calculus BC: Derivatives																

K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal	
															M	
District Objective Compute the derivative of a function numerically using a graphing calculator.												PASS Process Standard V B	Quarter II No. Days 1			
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input type="radio"/> PLAN <input type="radio"/> ACT <input checked="" type="radio"/> AP																
PASS Objective The student will...													NCTM Standard Pg. 294 Pgs. 300-302			
Text Correlation None								Rating 3	Additional Resources Graphing Calculator TI Graphing Calculator Manual http://147.4.150.5/~matscw/RealWorld/tutorials/unit2_3.html							
Assessment Let f be the function given by $f(x) = 3e^{2x}$ and let g be the function given by $g(x) = 6x^3$. At what value of x do the graphs of f and g have parallel tangent lines? (a) -0.701 (b) -0.567 (c) -0.391 (d) -0.302 (e) -0.258																
AP Calculus BC: Derivatives																

K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal	
															M	
District Objective Know and apply the rules of differentiation for exponential, logarithmic, inverse trigonometric and special functions.												PASS Process Standard I A, B III A, C	Quarter I No. Days 3			
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input type="radio"/> PLAN <input type="radio"/> ACT <input checked="" type="radio"/> AP																
PASS Objective The student will...													NCTM Standard Pgs. 300-302 Pgs. 334-364			
Text Correlation Pgs. 311, 338, 377								Rating 1	Additional Resources							
Assessment If $f(x) = \ln x^2 - 1 $, then $f'(x) =$																
(a) $\left \frac{2x}{x^2 - 1} \right $					(b) $\frac{2x}{ x^2 - 1 }$					(c) $\frac{2 x }{x^2 - 1}$						
(d) $\frac{2x}{x^2 - 1}$					(e) $\frac{1}{x^2 - 1}$											
AP Calculus BC: Derivatives																

K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal
															M
District Objective Use implicit differentiation to determine the derivative of a function including inverse functions.												PASS Process Standard I A, B II A, B	Quarter I No. Days 1		
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input type="radio"/> PLAN <input type="radio"/> ACT <input checked="" type="radio"/> AP															
PASS Objective The student will...													NCTM Standard Pgs. 300-302 Pgs. 334-364		
Text Correlation Pg. 124		Rating 1	Additional Resources MAA - Pg. 48 http://www.math.ou.edu/reference/calcl1/learn/sec3_5/sec3_5.html												
Assessment If $x^3 + 3xy + 2y^3 = 17$, then in terms of x and y , $\frac{dy}{dx} =$															
(a) $-\frac{x^2 + y}{x + 2y^2}$					(b) $-\frac{x^2 + y}{x + y^2}$					(c) $-\frac{x^2 + y}{x + 2y}$					
(d) $-\frac{x^2 + y}{2y^2}$					(e) $\frac{-x^2}{1 + 2y^2}$										
AP Calculus BC: Derivatives															

K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal	
											I	E			M	
District Objective Estimate numeric derivatives using local linear approximations.												PASS Process Standard I A, B V A, B	Quarter I No. Days 1			
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input type="radio"/> PLAN <input type="radio"/> ACT <input checked="" type="radio"/> AP																
PASS Objective The student will...													NCTM Standard Pg. 294 Pgs. 334-364			
Text Correlation Pg. 221								Rating 1	Additional Resources Graphing Calculator Barron's - Pgs. 118-120 http://www.ima.umn.edu/~arnold/graphics-g.html							
Assessment Let f be a differentiable function such that $f(3) = 2$ and $f'(3) = 5$. If the tangent line to the graph of f at $x = 3$ is used to find an approximation to a zero of f , that approximation is (a) 0.4 (b) 0.5 (c) 2.6 (d) 3.4 (e) 5.5																
AP Calculus BC: Derivatives																

K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal	
											I	E			M	
District Objective Determine the critical values of a function.												PASS Process Standard I A,B II A,B V B	Quarter II No. Days 1/2			
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input type="radio"/> PLAN <input type="radio"/> ACT <input checked="" type="radio"/> AP																
PASS Objective The student will...													NCTM Standard Pgs. 297-298 Pgs. 334-364			
Text Correlation Pg. 157								Rating 1	Additional Resources Graphing Calculator Barron's - Pgs. 90-91 I Challenge You! Activity							
Assessment The first derivative of the function f is given by $f'(x) = \frac{\cos^2 x}{x} - \frac{1}{5}$. How many critical values does f have on the open interval $(0, 10)$? (a) One (b) Three (c) Four (d) Five (e) Seven																
AP Calculus BC: Derivatives																

K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal
															M
District Objective Determine monotonic functions.												PASS Process Standard I A, B II A, B		Quarter II No. Days 1/2	
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input type="radio"/> PLAN <input type="radio"/> ACT <input checked="" type="radio"/> AP															
PASS Objective The student will...														NCTM Standard Pgs. 297-298 Pgs. 334-364	
Text Correlation Pg. 170								Rating 1		Additional Resources Graphing Calculator					
<p>Assessment</p> <p>Determine whether the following statements are always true or are at least sometimes false and explain your answer. You should assume that f is differentiable on its domain.</p> <p>(a) If f is increasing on an interval (a,b), then $f'(x) \geq 0$ for all x in (a,b).</p> <p>(b) If f is (strictly) increasing on an interval (a,b), then $f'(x) > 0$ for all x in (a,b).</p> <p>(c) If f is (strictly) increasing on an interval (a,b), then $f'(x) > 0$ for at least one number x in (a,b).</p> <p>(d) If $f'(x) \geq 0$ for all x in an interval (a,b), then f is (strictly) increasing on this interval.</p>															
AP Calculus BC: Derivatives															

K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal
											I	E			M
District Objective Determine relative (local) and absolute (global) extrema on an interval.												PASS Process Standard I A, B II A, B V B		Quarter II No. Days 1	
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input type="radio"/> PLAN <input type="radio"/> ACT <input checked="" type="radio"/> AP															
PASS Objective The student will...													NCTM Standard Pgs. 297-298 Pgs. 334-364		
Text Correlation Pgs. 155-156								Rating 1		Additional Resources Graphing Calculator MAA - Pgs. 56-60 Barron's - Pgs. 94-101					
Assessment What is the minimum value of $f(x) = x \ln x$? <ul style="list-style-type: none"> (a) $-e$ (b) -1 (c) $-\frac{1}{e}$ (d) 0 (e) $f(x)$ has no minimum value. 															
AP Calculus BC: Derivatives															

K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal	
															M	
District Objective Know and apply Rolle's Theorem and the Mean Value Theorem.												PASS Process Standard I A, B III D	Quarter II No. Days 1			
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input type="radio"/> PLAN <input type="radio"/> ACT <input checked="" type="radio"/> AP																
PASS Objective The student will...													NCTM Standard Pgs. 334-364			
Text Correlation Pgs. 163-165								Rating 1	Additional Resources Graphing Calculator MAA - Pgs. 51-52 Barron's - Pgs. 60-61 http://www.brookscole.com/math/puzzler/rolhei/rolhei.html							
Assessment If $f(x) = \sin x$ then there exists a number c in the interval $\frac{\pi}{2} < x < \frac{3\pi}{2}$ that satisfies the conclusion of the Mean Value Theorem. Which of the following could be c ? (a) $\frac{2\pi}{3}$ (b) $\frac{3\pi}{4}$ (c) $\frac{5\pi}{6}$ (d) π (e) $\frac{3\pi}{2}$																
AP Calculus BC: Derivatives																

K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal
															M
District Objective Use the First and Second Derivative Tests to determine relative minima and maxima.												PASS Process Standard I A, B III A, B, C V B, C	Quarter II No. Days 2		
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input type="radio"/> PLAN <input type="radio"/> ACT <input checked="" type="radio"/> AP															
PASS Objective The student will...													NCTM Standard Pgs. 334-364		
Text Correlation Pgs. 171-183				Rating 1		Additional Resources Graphing Calculator MAA - Pgs. 56-60 Barron's - Pgs. 94-101 Greenhouse Activity									
Assessment If g is a differentiable function such that $g(x) < 0$ for all real numbers x and if $f'(x) = (x^2 - 4)g(x)$, which of the following is true? <ul style="list-style-type: none"> (a) f has a relative maximum at $x = -2$ and a relative minimum at $x = 2$. (b) f has a relative minimum at $x = -2$ and a relative maximum at $x = 2$. (c) f has a relative minima at $x = -2$ and at $x = 2$. (d) f has a relative maxima at $x = -2$ and at $x = 2$. (e) It cannot be determined if f has any relative extrema. 															
AP Calculus BC: Derivatives															

K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal
									I		E	E			M
District Objective Determine increasing and decreasing intervals of a function.												PASS Process Standard I A, B III A, B, C		Quarter II No. Days 1	
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input type="radio"/> PLAN <input type="radio"/> ACT <input checked="" type="radio"/> AP															
PASS Objective The student will...														NCTM Standard Pgs. 305-306 Pgs. 334-364	
Text Correlation Pg. 169				Rating 1		Additional Resources Graphing Calculator MAA - Pgs. 56-60 Barron's - Pgs. 94-101 Eleven Relationships Card Game									
Assessment What are all values of x for which the function f defined by $f(x) = x^3 + 3x^2 - 9x + 7$ is increasing? (a) $-3 < x < 1$ (b) $-1 < x < 1$ (c) $x < -3$ or $x > 1$ (d) $x < -1$ or $x > 3$ (e) All real numbers															
AP Calculus BC: Derivatives															

K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal
															M
District Objective Determine the points of inflection of a function.												PASS Process Standard I A, B III A, B, C	Quarter II No. Days 1		
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input type="radio"/> PLAN <input type="radio"/> ACT <input checked="" type="radio"/> AP															
PASS Objective The student will...													NCTM Standard Pgs. 334-364		
Text Correlation Pg. 181								Rating 1	Additional Resources Graphing Calculator MAA - Pgs. 61-63 Barron's - Pgs. 94-101						
Assessment If $f''(x) = x^2 + 1(x - 2)^2$, then the graph of f has inflection points when $x =$ <ul style="list-style-type: none"> (a) -1 only (b) 2 only (c) -1 and 0 only (d) -1 and 2 only (e) -1, 0, and 2 only 															
AP Calculus BC: Derivatives															

K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal
															M
District Objective Determine intervals of concavity of a function.												PASS Process Standard I A, B III A, B, C		Quarter II No. Days 1	
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input type="radio"/> PLAN <input type="radio"/> ACT <input checked="" type="radio"/> AP															
PASS Objective The student will...														NCTM Standard Pgs. 305-306 Pgs. 334-364	
Text Correlation Pg. 179								Rating 1		Additional Resources Graphing Calculator; MAA - Pgs. 61-63 Barron's - Pgs. 94-101 From f' to f Activity					
Assessment															
<p>The graph of $y = 3x^4 - 16x^3 + 24x^2 + 48$ is concave down for</p> <p>(a) $x < 0$ (b) $x > 0$ (c) $x < -2$ or $x > -\frac{2}{3}$</p> <p>(d) $x < \frac{2}{3}$ or $x > 2$ (e) $\frac{2}{3} < x < 2$</p>															

AP Calculus BC: Derivatives

K	1	2	3	4	5	6	7	Pre-Alg	Alg I	Geom	Alg II	MA	P & S	Pre-Cal	AP Cal				
															M				
District Objective Apply the relationships of f , f' , f'' in a variety of applications including curve sketching and optimization.												PASS Process Standard I A, B II A, B, C III A, B IV A, B, C, D V A	Quarter II No. Days 5						
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input type="radio"/> PLAN <input type="radio"/> ACT <input checked="" type="radio"/> AP																			
PASS Objective The student will...														NCTM Standard Pgs. 305-306, Pgs. 334-364					
Text Correlation Pg. 196								Rating 2		Additional Resources Graphing calculator; Relationships of f , f' , f'' Activity; Barron's - Pgs. 95-97, 107-109									
Assessment The graph of the derivative of f is shown in the figure to the right. Which of the following could be the graph of f ?																			
(a)				(b)				(c)				(d)				(e)			
AP Calculus BC: Derivatives																			

K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal	
															M	
District Objective Interpret the derivatives as a rate of change in a variety of applied contexts including velocity, speed, and acceleration.												PASS Process Standard I A, B II A, B, C III A, B IV A, B, C, D V A	Quarter II No. Days 2			
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input type="radio"/> PLAN <input type="radio"/> ACT <input checked="" type="radio"/> AP																
PASS Objective The student will...													NCTM Standard Pgs. 305-306 Pgs. 334-364			
Text Correlation Pgs. 205-209								Rating 1	Additional Resources Graphing Calculator (CBL); Analyzing a Falling Object Lab Activity; MAA - Pgs. 64-72; Barron's - Pgs. 112-117							
Assessment A particle moves along the x -axis so that its position at time t is given by $x(t) = t^2 - 6t + 5$. For what value of t is the velocity of the particle zero? (a) 1 (b) 2 (c) 3 (d) 4 (e) 5																
AP Calculus BC: Derivatives																

K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal
															M
District Objective Apply derivatives to real-world problems involving related rates.												PASS Process Standard I A, B II A, B III A, C IV A, B, C, D V A, C	Quarter II No. Days 2		
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input type="radio"/> PLAN <input type="radio"/> ACT <input checked="" type="radio"/> AP															
PASS Objective The student will...													NCTM Standard Pgs. 305-306 Pgs. 334-364		
Text Correlation Pg. 141	Rating 1	Additional Resources MAA - Pgs. 53-55; Barron's - Pgs. 120-122 http://www.math.ucdavis.edu/~hass/Calculus/calcdemos/node2.html													
Assessment The radius of a circle is decreasing at a constant rate of 0.1 centimeter per second. In terms of the circumference C , what is the rate of change of the area of the circle, in square centimeters per second? <p style="text-align: center;"> (a) $-(0.2)\pi C$ (b) $-(0.1)C$ (c) $-\frac{(0.1)C}{2\pi}$ (d) $(0.1)^2 C$ (e) $(0.1)^2 \pi C$ </p>															

AP Calculus BC: Derivatives																
K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal	
															M	
District Objective Use differentials and approximations including Newton's Method.												PASS Process Standard I A, B II C IV A, B		Quarter II No. Days 1		
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input type="radio"/> PLAN <input type="radio"/> ACT <input checked="" type="radio"/> AP																
PASS Objective The student will...														NCTM Standard Pgs. 305-306		
Text Correlation Pg. 215						Rating 1		Additional Resources MAA - Pgs. 51-52 Barron's - Pgs. 118-120 www.math.vanderbilt.edu/npscrooke/toolkit.shtml								
Assessment If Newton's method is used to approximate the real root of $x^3 + x - 1 = 0$, then a first approximation $x_1 = 1$ would lead to a third approximation of $x_3 =$ <ol style="list-style-type: none"> 0.682 0.686 0.694 0.750 1.637 																

AP Calculus BC: Derivatives

K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal
															M
District Objective Apply derivatives in the analysis of planar curves given in parametric, polar and vector form, including velocity and acceleration.												PASS Process Standard I A, B III A, C IV A, B, C, D V C		Quarter II No. Days 2	
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input type="radio"/> PLAN <input type="radio"/> ACT <input checked="" type="radio"/> AP															
PASS Objective The student will...													NCTM Standard Pgs. 305-306 Pgs. 334-364		
Text Correlation Pgs. 785-790							Rating 2		Additional Resources Graphing Calculator Barron's - Pgs. 113-117						
Assessment An object moves according to the position function $\mathbf{r}(t) = -2 \cos 3t\mathbf{i} + \sin 3t\mathbf{j}$. Find the maximum speed of the object. (a) 0 (b) 3 (c) 6 (d) 12 (e) None of these															

AP Calculus BC: Derivatives

K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal
															M
District Objective Use a geometric interpretation of differential equations via slope fields to show the relationship between slope fields and derivatives of implicitly defined functions.												PASS Process Standard I A, B II C III A, C V B	Quarter II No. Days 1		
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input type="radio"/> PLAN <input type="radio"/> ACT <input checked="" type="radio"/> AP															
PASS Objective The student will...													NCTM Standard Pgs. 305-306 Pgs. 334-364		
Text Correlation Pg. 312				Rating 2		Additional Resources Graphing Calculator Barron's - Pgs. 188-199 http://archives.math.utk.edu/visual.calculus/4/slope.fields.2/index.html/									
Assessment The slope field shown at the right is for the differential equation (a) $y' = x + 1$ (b) $y' = \sin x$ (c) $y' = -\sin x$ (d) $y' = \cos x$ (e) $y' = -\cos x$															

AP Calculus BC: Derivatives																			
K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal				
															M				
District Objective Determine the numerical solution of differential equations using Euler's Method.												PASS Process Standard I A, B V B		Quarter II No. Days 1					
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input type="radio"/> PLAN <input type="radio"/> ACT <input checked="" type="radio"/> AP																			
PASS Objective The student will...													NCTM Standard Pgs. 305-306						
Text Correlation Pg. 1075						Rating 2		Additional Resources Graphing Calculator Barron's - Pgs. 301-305											
Assessment If you use Euler's Method and two steps with $\Delta x = 0.1$ for the d.e. $y' = y$, with initial value $y(0) = 1$, then, when $x = 0.2$, y is approximately (a) 1.100 (b) 1.210 (c) 1.331 (d) 1.464 (e) none of these																			

AP Calculus BC: Integrals																
K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal	
								I	E	E	E	E			M	
District Objective Estimate area using left, right, midpoint, upper, lower, and trapezoidal sums.												PASS Process Standard I A, B II A, B, C III A V A, B, C		Quarter II No. Days 1		
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input type="radio"/> PLAN <input type="radio"/> ACT <input checked="" type="radio"/> AP																
PASS Objective The student will...														NCTM Standard Pgs. 322-323 Pgs. 334-364		
Text Correlation Pgs. 254-257							Rating 2		Additional Resources MAA - Pgs. 86-91 Barron's - Pgs. 188-199 The Golden Pond Activity							
Assessment <p>If the definite integral $\int_0^2 e^{-x^2} dx$ is first approximated by using two inscribed rectangles of equal width and then approximated by using the trapezoidal rule with $n = 2$, the difference between the two approximations is</p> <p>(a) 53.60 (b) 30.51 (c) 27.80 (d) 26.80 (e) 12.78</p>																

AP Calculus BC: Integrals

K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal											
															M											
District Objective Approximate definite integrals of functions represented algebraically, geometrically, and by tables of values using Riemann sums and the Trapezoidal Rule.												PASS Process Standard I A, B II A, B, C IV A V A, B, C		Quarter II No. Days 1												
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input type="radio"/> PLAN <input type="radio"/> ACT <input checked="" type="radio"/> AP																										
PASS Objective The student will...														NCTM Standard Pgs. 322-323 Pgs. 334-364												
Text Correlation Pgs. 299-303							Rating 2		Additional Resources MAA - Pgs. 86-91 Barron's - Pgs. 188-199 www.cut-the-knot.com/Curriculum/Calculus																	
Assessment																										
<table border="1" style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <tr> <td style="padding: 5px;">t (sec)</td> <td style="padding: 5px;">0</td> <td style="padding: 5px;">2</td> <td style="padding: 5px;">4</td> <td style="padding: 5px;">6</td> </tr> <tr> <td style="padding: 5px;">$a(t)$ (ft/sec²)</td> <td style="padding: 5px;">5</td> <td style="padding: 5px;">2</td> <td style="padding: 5px;">8</td> <td style="padding: 5px;">3</td> </tr> </table> <p style="margin-left: 40px;">The data for the acceleration $a(t)$ of a car from 0 to 6 seconds are given in the table above. If the velocity at $t = 0$ is 11 feet per second, the approximate value of the velocity at $t = 6$, computed using a left - hand Riemann sum with three subintervals of equal length, is</p> <p style="margin-left: 40px;">(a) 26 ft/sec (b) 30 ft/sec (c) 37 ft/sec (d) 39 ft/sec (e) 41 ft/sec</p>																	t (sec)	0	2	4	6	$a(t)$ (ft/sec ²)	5	2	8	3
t (sec)	0	2	4	6																						
$a(t)$ (ft/sec ²)	5	2	8	3																						

AP Calculus BC: Integrals															
K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal
															M
District Objective Compute Riemann sums using left, right, and midpoint evaluation points.												PASS Process Standard I A, B II A, C IV D		Quarter II No. Days 1	
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input type="radio"/> PLAN <input type="radio"/> ACT <input checked="" type="radio"/> AP															
PASS Objective The student will...													NCTM Standard Pgs. 334-364		
Text Correlation Pgs. 254-257				Rating 2		Additional Resources MAA - Pgs. 86-91; Barron's - Pgs. 188-199; Sherlock Holmes' Train Adventure Activity www.cut-the-knot.com/Curriculum/Calculus www.mecca.org/~halfacre/MATH/lessons.htm									
Assessment Use the Midpoint Rule, with $n = 4$, to approximate the area of the region bounded by $f(x) = x^3 - 6x^2 + 9$ the x -axis between $x = 0$ and $x = 3$. (a) 6.54 (b) 6.96 (c) 9.28 (d) 6.75 (e) None of these Answer: (b)															

AP Calculus BC: Integrals

K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal
															M
District Objective Find area using the limit definition of a Riemann Sum.												PASS Process Standard I A, B II C III D IV D	Quarter II No. Days 1		
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input type="radio"/> PLAN <input type="radio"/> ACT <input checked="" type="radio"/> AP															
PASS Objective The student will...														NCTM Standard Pgs. 334-364	
Text Correlation Pgs. 264-265				Rating 1		Additional Resources MAA - Pgs. 86-91 Barron's - Pgs. 188-199 http://archives.math.utk.edu/visual.calculus/4/areas.3/index.html									
Assessment Let $s(n) = \sum_{i=1}^n \left(\frac{1}{i} + \frac{i^2}{n^3} \right)$. Find the limit of $s(n)$ as $n \rightarrow \infty$. (a) $\frac{17}{12}$ (b) $\frac{10}{3}$ (c) $\frac{14}{3}$ (d) $\frac{20}{3}$ (e) None of these Answer: (c)															

AP Calculus BC: Integrals

K	1	2	3	4	5	6	7	Pre-Alg	Alg I	Geom	Alg II	MA	P & S	Pre-Cal	AP Cal
															M
District Objective Know and apply the definition of a definite integral as the limit of a summing process.												PASS Process Standard I A, B II A, C III A, C	Quarter II No. Days 2		
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input type="radio"/> PLAN <input type="radio"/> ACT <input checked="" type="radio"/> AP															
PASS Objective The student will...													NCTM Standard Pgs. 334-364		
Text Correlation Pgs. 266-270							Rating 1		Additional Resources Barron's - Pgs. 186-188						
Assessment The expression $\frac{1}{50} \left(\sqrt{1} + \sqrt{2} + \sqrt{3} + \dots + \sqrt{50} \right)$ is a Riemann sum approximation for															
(a) $\int_0^{\sqrt{50}} \sqrt{x} \, dx$					(b) $\int_0^{\sqrt{50}} x \, dx$					(c) $\frac{1}{50} \int_0^{\sqrt{50}} \sqrt{x} \, dx$					
(d) $\frac{1}{50} \int_0^{\sqrt{50}} x \, dx$					(e) $\frac{1}{50} \int_0^{\sqrt{50}} \sqrt{x} \, dx$										

AP Calculus BC: Integrals

K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal
															M
District Objective Find antiderivatives following directly from derivatives of basic functions including use of the general power rule.												PASS Process Standard I A, B II A, B III A, C	Quarter II No. Days 1		
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input type="radio"/> PLAN <input type="radio"/> ACT <input checked="" type="radio"/> AP															
PASS Objective The student will...														NCTM Standard Pgs. 334-364	
Text Correlation Pgs. 241-248								Rating 1		Additional Resources Barron's - Pgs. 149-155					
Assessment $\int_0^2 (x^3 - 6x) dx =$ <p style="text-align: center;"> (a) 2 (b) 4 (c) 6 (d) 36 (e) 42 </p>															

AP Calculus BC: Integrals

K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal
															M
District Objective Know and apply the properties of definite integrals.												PASS Process Standard I A, B II A, B, C III A, C IV A, D	Quarter II No. Days 1/2		
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input type="radio"/> PLAN <input type="radio"/> ACT <input checked="" type="radio"/> AP															
PASS Objective The student will...													NCTM Standard Pgs. 334-364		
Text Correlation Pg. 270					Rating 1		Additional Resources MAA - Pgs. 93-95 Mudd Math Fun Facts: Calculus Limerick Activity								
Assessment If f and g are continuous functions, and if $f(x) \geq 0$ for all real numbers x , which of the following must be true?															
I. $\int_a^b f(x)g(x) dx = \int_a^b f(x) dx \int_a^b g(x) dx$															
II. $\int_a^b (f(x) + g(x)) dx = \int_a^b f(x) dx + \int_a^b g(x) dx$															
III. $\int_a^b \sqrt{f(x)g(x)} dx = \sqrt{\int_a^b f(x) dx \int_a^b g(x) dx}$															
(a) I only (b) II only (c) III only (d) II and III only (e) I, II, and III															

AP Calculus BC: Integrals

K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal
															M
District Objective Find the constant of integration from initial conditions.												PASS Process Standard I A, B IV A, B, C		Quarter II No. Days 1/2	
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input type="radio"/> PLAN <input type="radio"/> ACT <input checked="" type="radio"/> AP															
PASS Objective The student will...													NCTM Standard Pgs. 300-302 Pgs. 334-364		
Text Correlation Pgs. 246-147						Rating 1		Additional Resources Barron's - Pgs. 160-161							
Assessment If $\frac{dy}{dx} = 2y^2$ and if $y = -1$ when $x = 1$, then when $x = 2$, $y =$															
(a) $-\frac{2}{3}$ (b) $-\frac{1}{3}$ (c) 0 (d) $\frac{1}{3}$ (e) $\frac{2}{3}$															

AP Calculus BC: Integrals

K	1	2	3	4	5	6	7	Pre-Alg	Alg I	Geom	Alg II	MA	P & S	Pre-Cal	AP Cal
															M
District Objective Use the Fundamental Theorem of Calculus to evaluate definite integrals.												PASS Process Standard II C III A, B, C, D V C	Quarter II No. Days 1		
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input type="radio"/> PLAN <input type="radio"/> ACT <input checked="" type="radio"/> AP															
PASS Objective The student will...														NCTM Standard Pgs. 334-364	
Text Correlation Pgs. 274-276								Rating 1		Additional Resources Barron's - Pgs. 181, 186-188 http://www.brookscole.com/math/puzzler/perime/perime.html					
Assessment $\int_1^e \frac{e^{x^2} - 1}{x} dx =$ <p style="text-align: center;"> (a) $e - \frac{1}{e}$ (b) $e^2 - e$ (c) $\frac{e^2}{2} - e + \frac{1}{2}$ (d) $e^2 - 2$ (e) $\frac{e^2}{2} - \frac{3}{2}$ </p>															

AP Calculus BC: Integrals

K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal
															M
District Objective Use the Second Fundamental Theorem of Calculus to interpret a rate of change as the change of a quantity over an interval.												PASS Process Standard I A, B III A, B, C		Quarter II No. Days 1	
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input type="radio"/> PLAN <input type="radio"/> ACT <input checked="" type="radio"/> AP															
PASS Objective The student will...													NCTM Standard Pgs. 305-306 Pgs. 334-364		
Text Correlation Pgs. 280-282								Rating 1		Additional Resources MAA - Pgs. 104-111					
Assessment $\frac{d}{dx} \int_0^x \cos 2\pi u \, du$ is															
(a) 0 (b) $\frac{1}{2\pi} \sin x$ (c) $\frac{1}{2\pi} \cos 2\pi x$															
(d) $\cos 2\pi x$ (e) $2\pi \cos 2\pi x$															

AP Calculus BC: Integrals

K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal
															M
District Objective Know and apply the Mean Value Theorem.												PASS Process Standard I A,B II A,C IV D	Quarter II No. Days 1/2		
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input type="radio"/> PLAN <input type="radio"/> ACT <input checked="" type="radio"/> AP															
PASS Objective The student will...														NCTM Standard Pgs. 334-364	
Text Correlation Pg. 277								Rating 1		Additional Resources Barron's - Pg. 182					
Assessment If f is continuous on the closed interval $[a, b]$, then there exists c such that $a < c < b$ and $\int_a^b f(x) dx =$															
(a) $\frac{f(c)}{b-a}$					(b) $\frac{f(b)-f(a)}{b-a}$					(c) $f(b)-f(a)$					
(d) $f'(c)(b-a)$								(e) $f(c)(b-a)$							

AP Calculus BC: Integrals															
K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal
															M
District Objective Evaluate a definite integral using a graphing calculator.												PASS Process Standard V A, B, C		Quarter III No. Days 1/2	
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input type="radio"/> PLAN <input type="radio"/> ACT <input checked="" type="radio"/> AP															
PASS Objective The student will...													NCTM Standard Pgs. 300-302		
Text Correlation None						Rating 3		Additional Resources Graphing Calculator TI Calculator Guide							
Assessment $\int_1^{500} (13^x - 11^x) dx + \int_2^{500} (11^x - 13^x) dx =$ <p>(a) 0.000 (b) 14.946 (c) 34.415 (d) 46.000 (e) 136.364</p>															

AP Calculus BC: Integrals																
K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal	
															M	
District Objective Find the average value of a function.												PASS Process Standard I A, B II A, C III A, C IV A, B, C, D		Quarter II No. Days 1		
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input type="radio"/> PLAN <input type="radio"/> ACT <input checked="" type="radio"/> AP																
PASS Objective The student will...														NCTM Standard Pgs. 334-364		
Text Correlation Pg. 278						Rating 1		Additional Resources Barron's - Pgs. 201-207								
Assessment																
<p>What is the average value of $y = x^2 \sqrt{x^3 + 1}$ on the interval $[0, 2]$?</p> <p>(a) $\frac{26}{9}$ (b) $\frac{52}{9}$ (c) $\frac{26}{3}$</p> <p>(d) $\frac{52}{3}$ (e) 24</p>																

AP Calculus BC: Integrals

K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal
															M
District Objective Find antiderivatives by substitution of variables including change of limits for definite integrals.												PASS Process Standard I A, B II A, B, C	Quarter III No. Days 3		
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input type="radio"/> PLAN <input type="radio"/> ACT <input checked="" type="radio"/> AP															
PASS Objective The student will...													NCTM Standard Pgs. 334-364		
Text Correlation Pgs. 287-295							Rating 1		Additional Resources Barron's - Pgs. 151-155						
Assessment $\int_0^{\sqrt{3}} \frac{dx}{\sqrt{4-x^2}} =$ <div style="display: flex; justify-content: space-around; margin-top: 20px;"> <div style="text-align: center;">(a) $\frac{\pi}{3}$</div> <div style="text-align: center;">(b) $\frac{\pi}{4}$</div> <div style="text-align: center;">(c) $\frac{\pi}{6}$</div> </div> <div style="display: flex; justify-content: space-around; margin-top: 20px;"> <div style="text-align: center;">(d) $\frac{1}{2} \ln 2$</div> <div style="text-align: center;">(e) $-\ln 2$</div> </div>															

AP Calculus BC: Integrals

K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal
															M
District Objective Find antiderivatives by parts and simple partial fractions with non-repeating linear factors only.												PASS Process Standard I A, B II A, B, C	Quarter III No. Days 2		
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input type="radio"/> PLAN <input type="radio"/> ACT <input checked="" type="radio"/> AP															
PASS Objective The student will...													NCTM Standard Pgs. 334-364		
Text Correlation Pgs. 481-486, 508-511							Rating 1		Additional Resources Barron's - Pgs. 157-160 Mudd Math Fun Facts: One Equals Zero: Integral Form Activity						
Assessment $\int_0^1 \sqrt{x} \ln(x+1) dx =$ <p style="text-align: center;"> (a) 0 (b) 1 (c) $\frac{16}{15}$ (d) $\frac{7}{5}$ (e) 2 </p>															

AP Calculus BC: Integrals

K	1	2	3	4	5	6	7	Pre-Alg	Alg I	Geom	Alg II	MA	P & S	Pre-Cal	AP Cal
															M
District Objective Find improper integrals as limits of definite integrals.												PASS Process Standard I A, B III A, B, C		Quarter III No. Days 1	
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input type="radio"/> PLAN <input type="radio"/> ACT <input checked="" type="radio"/> AP															
PASS Objective The student will...													NCTM Standard Pgs. 334-364		
Text Correlation Pgs. 533-539								Rating 1		Additional Resources Barron's - Pgs. 234-242					
Assessment $\int_1^{\infty} \frac{x}{e+x^2} dx$ is															
(a) $-\frac{1}{2}$				(b) $-\frac{1}{4}$				(c) $\frac{1}{4}$							
(d) $\frac{1}{2}$				(e) divergent											

AP Calculus BC: Integrals															
K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal
															M
District Objective Use an integral of a rate of change to give accumulated change.												PASS Process Standard I A, B II A, B, C III A, B, C IV A, C D V C		Quarter III No. Days 1	
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input type="radio"/> PLAN <input type="radio"/> ACT <input checked="" type="radio"/> AP															
PASS Objective The student will...														NCTM Standard Pgs. 305-306 Pgs. 334-364	
Text Correlation Pgs. 277-279						Rating 2		Additional Resources Barron's - Pgs. 280-282 Surfing (Derivatives) Activity							
Assessment The acceleration of a particle moving along the x -axis at time t is given by $a(t) = 6t - 2$. If the velocity is 25 when $t = 3$ and the position is 10 when $t = 1$, then the position $x(t) =$ <ol style="list-style-type: none"> $9t^2 + 1$ $3t^2 - 2t + 4$ $t^3 - t^2 + 4t + 6$ $t^3 - t^2 + 9t - 20$ $36t^3 - 4t^2 - 77t + 55$ 															

AP Calculus BC: Integrals															
K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal
															M
District Objective Know and apply integration formulas and methods to integrate trigonometric, exponential, logarithmic, and inverse trigonometric functions.												PASS Process Standard I A, B II A, B, C III A, C		Quarter III No. Days 2	
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input type="radio"/> PLAN <input type="radio"/> ACT <input checked="" type="radio"/> AP															
PASS Objective The student will...														NCTM Standard Pgs. 334-364	
Text Correlation Pgs. 321-326 342-343 350-351								Rating 1		Additional Resources Barron's - Pgs. 149-155					
Assessment $\int_{\frac{\pi}{4}}^{\frac{\pi}{2}} \frac{e^{\tan x}}{\cos^2 x} dx$ is <p style="text-align: center;"> (a) 0 (b) 1 (c) $e - 1$ (d) e (e) $e + 1$ </p>															

AP Calculus BC: Integrals															
K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal
															M
District Objective Apply integration methods to find the area of a region bounded by planar curves.												PASS Process Standard I A, B II A, B, C III A, C IV A, B, C		Quarter III No. Days 2	
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input type="radio"/> PLAN <input type="radio"/> ACT <input checked="" type="radio"/> AP															
PASS Objective The student will...														NCTM Standard Pgs. 334-364	
Text Correlation Pgs. 407-412							Rating 1		Additional Resources Barron's - Pgs. 222-225 http://www.math.hmc.edu/funfacts/ffiles/20002.3-2.shtml						
Assessment The area of the region enclosed by the graphs of $y = x^2$ and $y = x$ is (a) $\frac{1}{6}$ (b) $\frac{1}{3}$ (c) $\frac{1}{2}$ (d) $\frac{5}{6}$ (e) 1															

AP Calculus BC: Integrals

K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal
															M

District Objective Apply integration methods to find the area of a region bounded by polar curves.	PASS Process Standard I A, B II A, B, C III A, C V A, B, C	Quarter III No. Days 1
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input type="radio"/> PLAN <input type="radio"/> ACT <input checked="" type="radio"/> AP		
PASS Objective The student will...		NCTM Standard Pgs. 334-364
Text Correlation Pgs. 681-684	Rating 1	Additional Resources Graphing Calculator Barron's - Pg. 226 Roses are Violet Activity
Assessment Which of the following is equal to the area of the region inside the polar curve $r = 2 \cos \theta$ and outside the polar curve $r = \cos \theta$?		
(a) $3 \int_0^{\pi} \cos^2 \theta \, d\theta$ (b) $3 \int_0^{\pi} \cos^2 \theta \, d\theta$ (c) $\frac{3}{2} \int_0^{\pi} \cos^2 \theta \, d\theta$ (d) $3 \int_0^{\frac{\pi}{2}} \cos \theta \, d\theta$ (e) $3 \int_0^{\pi} \cos \theta \, d\theta$		

AP Calculus BC: Integrals

K	1	2	3	4	5	6	7	Pre-Alg	Alg I	Geom	Alg II	MA	P & S	Pre-Cal	AP Cal
															M
District Objective Find the volume of a solid with a known cross section.												PASS Process Standard I A, B III A, C V B	Quarter III No. Days 1		
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input type="radio"/> PLAN <input type="radio"/> ACT <input checked="" type="radio"/> AP															
PASS Objective The student will...													NCTM Standard Pgs. 315-318 Pgs. 334-364		
Text Correlation Pgs. 421-422							Rating 1		Additional Resources Barron's - Pgs. 228-231 Volume of Cross Sections Activity						
Assessment The base of a solid S is the region enclosed by the graph of $y = \sqrt{\ln x}$, the line $x = e$, and the x -axis. If the cross sections of S perpendicular to the x -axis are squares, then the volume of S is (a) $\frac{1}{2}$ (b) $\frac{2}{3}$ (c) 1 (d) 2 (e) $\frac{1}{3}e^3 - 1$															

AP Calculus BC: Integrals															
K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal
															M
District Objective Find the volume of a solid of revolution about a horizontal or vertical axis using the disc and washer methods.												PASS Process Standard I A, B II A, B, C III A, C IV A, B, D		Quarter III No. Days 3	
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input type="radio"/> PLAN <input type="radio"/> ACT <input checked="" type="radio"/> AP															
PASS Objective The student will...														NCTM Standard Pgs. 315-318 Pgs. 334-364	
Text Correlation Pgs. 416-420			Rating 1		Additional Resources Barron's - Pgs. 228-231 Smalleygan's Island Luau Activity http://archives.math.utk.edu/visual.calculus/5/volumes.4/index.html										
Assessment The region enclosed by the x -axis, the line $x = 3$, and the curve $y = \sqrt{x}$ is rotated about the x -axis. What is the volume of the solid generated? (a) 3π (b) $2\sqrt{3}\pi$ (c) $\frac{9}{2}\pi$ (d) 9π (e) $\frac{36\sqrt{3}}{5}\pi$															

AP Calculus BC: Integrals

K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal
															M
District Objective Find the volume of a solid of revolution about a horizontal or vertical axis using the shell method.												PASS Process Standard I A, B II A, B, C III A, C IV A, B, D		Quarter III No. Days 1	
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input type="radio"/> PLAN <input type="radio"/> ACT <input checked="" type="radio"/> AP															
PASS Objective The student will...														NCTM Standard Pgs. 315-318 Pgs. 334-364	
Text Correlation Pgs. 427-431				Rating 1		Additional Resources Barron's - Pgs. 231-232 http://archives.math.utk.edu/visual.calculus/5/volumes.6/index.html									
Assessment When the region enclosed by graphs of $y = x$ and $y = 4x - x^2$ is revolved about the y -axis, the volume of the solid generated is given by															
(a) $\pi \int_0^3 (4x - x^2 - x) dx$ (b) $\pi \int_0^3 (4x^2 - x^2 - x^2) dx$ (c) $\pi \int_0^2 (4x - x^2) dx$ (d) $2\pi \int_0^3 (4x^3 - 3x^2) dx$ (e) $2\pi \int_0^3 (4x^2 - x^3) dx$															

AP Calculus BC: Integrals															
K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal
															M
District Objective Find the distance traveled by a particle along a line.												PASS Process Standard I A, B II A, B, C III A, C IV A, B, C, D V A		Quarter III No. Days 1	
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input type="radio"/> PLAN <input type="radio"/> ACT <input checked="" type="radio"/> AP															
PASS Objective The student will...														NCTM Standard Pgs. 334-364	
Text Correlation None				Rating 3		Additional Resources Barron's - Pgs. 280-283 http://www.math.odu.edu/cbii/calcanim/main.html									
Assessment															
<p>A bug begins to crawl up a vertical wire at time $t = 0$.</p> <p>The velocity v of the bug at time t, $0 \leq t \leq 8$, is given by the function whose graph is shown above. What is the total distance the bug traveled from $t = 0$ to $t = 8$?</p> <p>(a) 14 (b) 13 (c) 11 (d) 8 (e) 6</p>															

AP Calculus BC: Integrals

K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal
															M
District Objective Find the length of a curve including a curve given in parametric form.												PASS Process Standard I A, B II A, C IV A, D V A		Quarter III No. Days 1	
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input type="radio"/> PLAN <input type="radio"/> ACT <input checked="" type="radio"/> AP															
PASS Objective The student will...														NCTM Standard Pgs. 334-364	
Text Correlation Pgs. 435-437, 664-666								Rating 1		Additional Resources Barron's - Pgs. 232-234					
Assessment The length of one arch of the cycloid $x = t - \sin t$ $y = 1 - \cos t$ equals															
(a) $\int_0^{\pi} \sqrt{1 - \cos t} \, dt$					(b) $\int_0^{\pi} \sqrt{\frac{1 - \cos t}{2}} \, dt$					(c) $\int_0^{\pi} \sqrt{2 - 2 \cos t} \, dt$					
(d) $\int_0^{\pi} \sqrt{2 - 2 \cos t} \, dt$					(e) $2 \int_0^{\pi} \sqrt{\frac{1 - \cos t}{2}} \, dt$										

AP Calculus BC: Integrals																
K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal	
															M	
District Objective Solve separable differential equations and use them in modeling including applications with growth and decay.												PASS Process Standard I A, B II A, B, C III A, B, C IV A, D V A, B, C		Quarter III No. Days 2		
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input type="radio"/> PLAN <input type="radio"/> ACT <input checked="" type="radio"/> AP																
PASS Objective The student will...														NCTM Standard Pgs. 334-364		
Text Correlation Pgs. 366-373								Rating 1		Additional Resources Barron's - Pgs. 307-319 Demonstration 6: Exponential Decay and Hot Cups of Coffee Activity						
Assessment A puppy weighs 2.0 pounds at birth and 3.5 pounds two months later. If the weight of the puppy during its first 6 months is increasing at a rate proportional to its weight, then how much will the puppy weigh when it is 3 months old? (a) 4.2 pounds (b) 4.6 pounds (c) 4.8 pounds (d) 5.6 pounds (e) 6.5 pounds																

AP Calculus BC: Integrals																
K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal	
															M	
District Objective Solve logistic differential equations and use them in modeling.												PASS Process Standard I A, B II A, B, C III A, B, C IV A, D V A, B, C		Quarter III No. Days 1		
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input type="radio"/> PLAN <input type="radio"/> ACT <input checked="" type="radio"/> AP																
PASS Objective The student will...														NCTM Standard Pgs. 334-364		
Text Correlation Pg. 516				Rating 2		Additional Resources Graphing Calculator Barron's - Pgs. 315-319 http://www.math.duke.edu/education/ccp/materials/diffcalc/limpop/										

Assessment

Suppose a population of bears grows according to the logistic differential equation

$$\frac{dP}{dt} = 2P - 0.01P^2$$

where P is the number of bears at time t in years. Which of the following statements are true?

- I. The growth rate of the bear population is greatest at $P = 100$.
- II. If $P > 200$, the population of bears is decreasing.
- III. $\lim_{t \rightarrow \infty} P(t) = 200$.

- (a) I only (b) II only (c) I and III only (d) II and III only
 (e) I, II, and III

AP Calculus BC: Polynomial Approximations and Series

K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal
												I			M
District Objective Use technology to explore and determine convergence and divergence.												PASS Process Standard I A, B II C V A, B		Quarter III No. Days 1/2	
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input type="radio"/> PLAN <input type="radio"/> ACT <input checked="" type="radio"/> AP															
PASS Objective The student will...														NCTM Standard Pgs. 334-364	
Text Correlation None								Rating 3		Additional Resources Graphing Calculator MAA - Pgs. 130-132 Mudd Math Fun Facts: Space-Filling Curves Activity					

Assessment

Which of the following three improper integrals converge?

I. $\int_0^{\infty} \frac{1}{1+x^2} dx$

II. $\int_1^{\infty} \frac{1}{x} dx$

III. $\int_0^1 \frac{1}{x} dx$

- (a) II only
- (b) I and II only
- (c) I and III only
- (d) II and III only
- (e) I, II and III

AP Calculus BC: Polynomial Approximations and Series

K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal
															M
District Objective Use L'Hôpital's Rule to determine convergence and divergence of improper integrals and series.												PASS Process Standard I A, B II A, C III C IV D		Quarter III No. Days 1/2	
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input type="radio"/> PLAN <input type="radio"/> ACT <input checked="" type="radio"/> AP															
PASS Objective The student will...														NCTM Standard Pgs. 334-364	

Text Correlation Pgs. 533-539, 568-571	Rating 1	Additional Resources MAA - Pgs. 152-153 Barron's - Pgs. 234-235
-----------------------------------------------------	--------------------	------------------------------------------------------------------------------

Assessment

Which of the following sequences converge?

I. $\sum_{n=1}^{\infty} \frac{5^n}{2^{n-1}}$

II. $\sum_{n=1}^{\infty} \frac{1}{n^2}$

III. $\sum_{n=1}^{\infty} \frac{e^n}{1+e^n}$

- (a) I only (b) II only (c) I and II only
 (d) I and III only (e) I, II, and III

AP Calculus BC: Polynomial Approximations and Series

K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal
															M

District Objective
 Define a series as a sequence of partial sums and convergence as the limit of the sequence of partial sums.

PASS Process Standard
 I A, B
 II A, C
 III A, B, C

Quarter
 III
No. Days
 1

ITBS CRT EXPLORE EOI PLAN ACT AP

PASS Objective
 The student will...

NCTM Standard
 Pgs. 334-364

Text Correlation Pgs. 558-563	Rating 1	Additional Resources Graphing Calculator Barron's - Pgs. 338-349 An Introduction to Infinite Sequences Activity
-----------------------------------------	--------------------	---------------------------------------------------------------------------------------------------------------------------------

Assessment

The sum of the infinite geometric series $\frac{3}{2} + \frac{9}{16} + \frac{27}{128} + \frac{81}{1,024} + \dots$ is

- (a) 1.60 (b) 2.35 (c) 2.40 (d) 2.45 (e) 2.50

AP Calculus BC: Polynomial Approximations and Series

K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal
												I			M
District Objective Apply the concept of a series to examples including decimal expansion.												PASS Process Standard I A, B II A, B, C III A, D		Quarter III No. Days 1/2	
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input type="radio"/> PLAN <input type="radio"/> ACT <input checked="" type="radio"/> AP															
PASS Objective The student will...														NCTM Standard Pgs. 334-364	

Text Correlation Pgs. 561-563	Rating 2	Additional Resources Barron's - Pgs. 367-373 Mudd Math Fun Facts: Taylor-made Pi Activity
-----------------------------------------	--------------------	--------------------------------------------------------------------------------------------------------

Assessment

If $e^{-0.1}$ is computed using series, then, correct to three decimal places, it equals

- (a) 0.905
- (b) 0.950
- (c) 0.904
- (d) 0.900
- (e) 0.949

AP Calculus BC: Polynomial Approximations and Series

K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal
												I			M
District Objective Apply geometric series in applications.												PASS Process Standard I A, B III A, C IV A, B, D V A, B, C		Quarter III No. Days 1/2	
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input type="radio"/> PLAN <input type="radio"/> ACT <input checked="" type="radio"/> AP															

PASS Objective The student will...	NCTM Standard Pgs. 334-364
----------------------------------------------	--------------------------------------

Text Correlation Pgs. 561-563	Rating 2	Additional Resources MAA - Pgs. 137-140 Sample Problems from Chapter 4 Activity
-----------------------------------------	--------------------	----------------------------------------------------------------------------------------------

<p>Assessment</p> <p>The annual spending by tourists in a resort city is \$100 million. Approximately 75% of that revenue is again spent in the resort city, and of that amount approximately 75% is again spent in the same city, and so on. Write the geometric series that gives the total amount of spending generated by the \$100 million and find the sum of the series.</p> <p>(a) 260 million dollars (b) 380 million dollars (c) 400 million dollars (d) 430 million dollars</p>

AP Calculus BC: Polynomial Approximations and Series

K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal
															M

<p>District Objective</p> <p>Determine the convergence or divergence of geometric, telescoping, p, and harmonic series.</p>	<p>PASS Process Standard</p> <p>I A, B II A, B, C III A, B, C</p>	<p>Quarter III</p> <p>No. Days 1/2</p>
------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------	----------------------------------------------------------

<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input type="radio"/> PLAN <input type="radio"/> ACT <input checked="" type="radio"/> AP

PASS Objective The student will...	NCTM Standard Pgs. 334-364
----------------------------------------------	--------------------------------------

Text Correlation Pgs. 558-571	Rating 1	Additional Resources Graphing Calculator MAA - Pgs. 141-147 Barron's - Pgs. 336-347 Mudd Math Fun Facts: Inchworm on a Rubber Rope Activity
-----------------------------------------	--------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------

<p>Assessment</p> <p>Which of the following series converges?</p> <p>(a) $\sum \frac{1}{\sqrt[3]{n}}$ (b) $\sum \frac{1}{\sqrt{n}}$ (c) $\sum \frac{1}{n}$</p> <p>(d) $\sum \frac{1}{10n-1}$ (e) $\sum \frac{2}{n^2-5}$</p>

AP Calculus BC: Polynomial Approximations and Series

K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal
															M

<p>District Objective</p> <p>Apply terms of series as areas of rectangles and relate them to improper integrals.</p>	<p>PASS Process Standard</p> <p>I A, B III A, B, C IV D V A, B, C</p>	<p>Quarter</p> <p>III</p> <p>No. Days</p> <p>1/2</p>
-----------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	--------------------------------------------------------------------

<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input type="radio"/> PLAN <input type="radio"/> ACT <input checked="" type="radio"/> AP															
PASS Objective The student will...														NCTM Standard Pgs. 334-364	
Text Correlation Pgs. 568-569				Rating 1		Additional Resources Barron's - Pgs. 343-344 Series, Integrals, and Hidden Patterns Activity									
Assessment State why the integral is improper and determine its divergence or convergence. Evaluate the integral if it converges.															
1. $\int_0^4 \frac{1}{\sqrt{x}} dx$															
2. $\int_0^4 \frac{1}{\sqrt{x-3}} dx$															
3. $\int_0^2 \frac{1}{x-1} dx$															
4. $\int_0^2 \frac{1}{x-1} dx$															
AP Calculus BC: Polynomial Approximations and Series															
K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal
															M
District Objective Determine convergence or divergence of series using the Ratio Test.												PASS Process Standard I A, B II A, B, C III A, B, C		Quarter III No. Days 1 ½	

<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input type="radio"/> PLAN <input type="radio"/> ACT <input checked="" type="radio"/> AP															
PASS Objective The student will...														NCTM Standard Pgs. 334-364	
Text Correlation Pgs. 558-593				Rating 1		Additional Resources Barron's - Pgs. 346-347									
Assessment What are all values of x for which the series $\sum_{n=1}^{\infty} \frac{x - 2^n}{n3^n}$ converges? (a) $-3 \leq x \leq 3$ (b) $-3 < x < 3$ (c) $-1 < x \leq 5$ (d) $-1 \leq x \leq 5$ (e) $-1 \leq x < 5$															
AP Calculus BC: Polynomial Approximations and Series															
K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal
															M
District Objective Approximate the sum of an alternating series and determine error bound.												PASS Process Standard I A, B II A, B, C III A, C		Quarter III No. Days 1/2	

<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input type="radio"/> PLAN <input type="radio"/> ACT <input checked="" type="radio"/> AP															
PASS Objective The student will...														NCTM Standard Pgs. 334-364	
Text Correlation Pg. 583				Rating 1		Additional Resources Graphing Calculator Barron's - Pgs. 347-348, 364									
Assessment When $\sum_1^{\infty} \frac{(-1)^{n-1}}{3n-1}$ is approximated by the sum of its first 300 terms, the error is closest to (a) 0.001 (b) 0.002 (c) 0.005 (d) 0.01 (e) 0.02															
AP Calculus BC: Polynomial Approximations and Series															
K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal
															M

District Objective Find an nth degree polynomial approximation of a given function, including Taylor and Maclaurin's polynomials, with graphical demonstration of convergence.									PASS Process Standard I A, B II A, B, C III A, C V A, B, C				Quarter III No. Days 1		
○ ITBS ○ CRT ○ EXPLORE ○ EOI ○ PLAN ○ ACT ● AP															
PASS Objective The student will...											NCTM Standard Pgs. 334-364				
Text Correlation Pgs. 596-601			Rating 1		Additional Resources Graphing Calculator; MAA - Pgs. 154-158 Barron's - Pgs. 356-360 Mudd Math Fun Facts: Successive Differences of Powers Activity										
Assessment The Taylor series for $\ln(1+2x)$ about $x = 0$ is (a) $2x - \frac{(2x)^2}{2} + \frac{(2x)^3}{3} - \frac{(2x)^4}{4} + \dots$ (b) $2x - 2x^2 + 8x^3 - 16x^4 + \dots$ (c) $2x - 4x^2 + 16x^3 + \dots$ (d) $2x - x^2 + \frac{8}{3}x^3 - 4x^4 + \dots$ (e) $2x - \frac{(2x)^2}{2!} + \frac{(2x)^3}{3!} + \frac{(2x)^4}{4!} + \dots$															
AP Calculus BC: Polynomials Approximations and Series															
K	1	2	3	4	5	6	7	Pre-Alg	Alg I	Geom	Alg II	MA	P & S	Pre-Cal	AP Cal
															M

District Objective Determine the general Taylor series centered at $x=a$.										PASS Process Standard I A, B				Quarter III No. Days 1	
○ ITBS ○ CRT ○ EXPLORE ○ EOI ○ PLAN ○ ACT ● AP															
PASS Objective The student will...														NCTM Standard Pgs. 334-364	
Text Correlation Pgs. 622-629					Rating 1		Additional Resources MAA - Pgs. 154-158 Barron's - Pgs. 356-360 The Calculator Puzzler Activity								
Assessment Let f be the function given by $f(x) = \ln x-2 $ The third degree Taylor polynomial for f about $x=2$ is (a) $-\ln x-2 - \frac{\ln x-2 ^2}{2} - \frac{\ln x-2 ^3}{3}$ (b) $-(x-2) - \frac{\ln x-2 ^2}{2} - \frac{\ln x-2 ^3}{3}$ (c) $\ln x-2 - \frac{\ln x-2 ^2}{2} + \frac{\ln x-2 ^3}{3}$ (d) $\ln x-2 - \frac{\ln x-2 ^2}{2} + \frac{\ln x-2 ^3}{3}$ (e) $\ln x-2 - \frac{\ln x-2 ^2}{2} + \frac{\ln x-2 ^3}{3}$															
AP Calculus BC: Polynomial Approximations and Series															
K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal
															M

District Objective Find the Maclaurin series for the functions e^x , $\sin x$, $\cos x$, and $\frac{1}{1-x}$.										PASS Process Standard I A, B			Quarter III No. Days 1/2		
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input type="radio"/> PLAN <input type="radio"/> ACT <input checked="" type="radio"/> AP															
PASS Objective The student will...										NCTM Standard Pgs. 334-364					
Text Correlation Pgs. 598-599				Rating 1		Additional Resources Barron's - Pgs. 361-362									
Assessment The coefficient of x^2 in the Maclaurin series for $e^{\sin x}$ is <div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;">(a) 0</div> <div style="text-align: center;">(b) 1</div> <div style="text-align: center;">(c) $\frac{1}{2!}$</div> </div> <div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;">(d) -1</div> <div style="text-align: center;">(e) $\frac{1}{4}$</div> </div>															
AP Calculus BC: Polynomial Approximations and Series															
K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal
															M

District Objective Use formal manipulation of Taylor series and shortcuts to compute Taylor series, including differentiation, antidifferentiation, and the formation of new series from known series.									PASS Process Standard I A, B II A, C III A, B, C			Quarter III No. Days 2 ½			
○ ITBS ○ CRT ○ EXPLORE ○ EOI ○ PLAN ○ ACT ● AP															
PASS Objective The student will...									NCTM Standard Pgs. 334-364						
Text Correlation Pgs. 628-629			Rating 1		Additional Resources Mudd Math Fun Facts: <i>e</i> is irrational Activity										
Assessment															
$f(x) = \sum_{n=0}^{\infty} \frac{(-1)^n x^{2n+1}}{b^{n+1}g}$ <p>Find $f'(x)$</p> <p>(a) $\sum_{n=0}^{\infty} \frac{bgx^n}{n!}$ (b) $\sum_{n=0}^{\infty} \frac{bgx^{2n}}{b!g}$</p> <p>(c) $\sum_{n=0}^{\infty} \frac{bgx}{b^{n+1}g}$ (d) $\sum_{n=0}^{\infty} \frac{bg^{n+1}x^{2n}}{b^{n+2}g}$</p>															
AP Calculus BC: Polynomial Approximations and Series															
K	1	2	3	4	5	6	7	Pre-Alg	Alg I	Geom	Alg II	MA	P & S	Pre-Cal	AP Cal
															M

District Objective Represent a given function by a power series.									PASS Process Standard I A, B II A, B			Quarter III No. Days 1			
○ ITBS ○ CRT ○ EXPLORE ○ EOI ○ PLAN ○ ACT ● AP															
PASS Objective The student will...												NCTM Standard Pgs. 334-364			
Text Correlation Pgs. 615-619				Rating 1		Additional Resources Graphing Calculator MAA - Pgs. 159-161 Barron's - Pgs. 367-372									
Assessment															
Find the series representation of $\frac{1}{b-xg}$ and determine its interval of convergence.															
(a) $\sum_{n=1}^{\infty} nx^{n-1}, -1 < x < 1$															
(b) $\sum_{n=0}^{\infty} b^{-1}x^n, -1 \leq x \leq 1$															
(c) $\sum_{n=1}^{\infty} nx^n, -1 \leq x < 1$															
(d) $\sum_{n=0}^{\infty} b^{-1}x^{n-1}, -1 < x \leq 1$															
AP Calculus BC: Polynomial Approximations and Series															
K	1	2	3	4	5	6	7	Pre-Alg	Alg I	Geom	Alg II	MA	P & S	Pre-Cal	AP Cal
															M

District Objective Determine the radius and interval of convergence of a power series.										PASS Process Standard I A, B II A, B III A, B, C			Quarter III No. Days 1		
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input type="radio"/> PLAN <input type="radio"/> ACT <input checked="" type="radio"/> AP															
PASS Objective The student will...										NCTM Standard Pgs. 334-364					
Text Correlation Pgs. 607-610				Rating 1		Additional Resources Barron's - Pgs. 352-353									
Assessment															
<p>The radius of convergence of the series $\sum_{n=1}^{\infty} \frac{n^2}{2^n} \cdot \frac{n^n}{n!}$ is</p> <p>(a) 0 (b) 2 (c) $\frac{2}{e}$</p> <p>(d) $\frac{e}{2}$ (e) ∞</p>															
AP Calculus BC: Polynomial Approximations and Series															
K	1	2	3	4	5	6	7	Pre-Alg	Alg I	Geom	Alg II	MA	P & S	Pre-Cal	AP Cal
															M

District Objective Determine the Lagrange error bound for Taylor polynomials.										PASS Process Standard I A, B II A, B, C			Quarter III No. Days 1		
○ ITBS ○ CRT ○ EXPLORE ○ EOI ○ PLAN ○ ACT ● AP															
PASS Objective The student will...										NCTM Standard Pgs. 334-364					
Text Correlation Pgs. 602-603					Rating 1		Additional Resources Barron's - Pgs. 364-366								
Assessment															
<p>If the series $\tan^{-1} = 1 - \frac{1}{3} + \frac{1}{5} - \frac{1}{7} + \dots$ is used to approximate $\frac{\pi}{4}$ with an error less than 0.001, then the smallest number of terms needed is</p> <p>(a) 100 (b) 200 (c) 300 (d) 400 (e) 500</p>															
AP Calculus BC															
K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal
															MM

District Objective Analyze, synthesize, and apply learned objectives from the course to solve AP caliber problems in a variety of settings.		PASS Process Standard All	Quarter IV No. Days 35
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input type="radio"/> PLAN <input type="radio"/> ACT <input checked="" type="radio"/> AP			
PASS Objective The student will...			NCTM Standard Pgs. 334-364
Text Correlation	Rating	Additional Resources Past AP Tests and Free Response Questions Barron's - Pgs. 532-585	
Assessment			

Suggested Strategies / Activities