**WHS AP Calculus AB**

**Unit 1: Limits & Continuity**

**Week 1**

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| **Date** | **Section** | **Lesson Objectives/The student will:**  **Instructional Strategies/The teacher will:** | **Assignments** | **Planned Assessments** |
| 8/20  8/21 |  | Review syllabus; Review to prepare for course pretest  Answer questions about syllabus; Guide independent practice |  |  |
| 8/24 | Assess  1.1 | Take Calculus Readiness Test  Homework assignment: Identify basic problems in calculus, compare to precalculus mathematics  Monitor assessment | **Read Section 1.1 pages 42 - 46**  **p. 47** #1 - 6, 8, 9, 11 |  |
| 8/25 | 1.2 | Understand the concept of a limit: Evaluate limits using tables and graphs  Demonstrate use of tables to evaluate limits  Guide practice | **pp. 54-5:**  # 2 - 8 evens, 16-24 evens |  |
| 8/26 | 1.2 | Review homework; Complete classwork with partners  Answer student questions re: homework  Monitor independent practice | **Class: pp. 55-6:** #26 - 32 evens  **Home:** Watch 1.3 Video 1  **p. 67:** #2 - 22 evens |  |
| 8/27 | 1.3 | Review homework; Find limits analytically using properties of limits and other strategies; Complete classwork with partners  Answer student questions re: video and homework  Explain & demonstrate use of properties of limits to evaluate  Monitor independent practice | **Home: pp. 67-8:** #24 - 48 evens  **Home:** Watch 1.3 Video 2  **p. 68:** #50, 66, 86, 90 |  |
| 8/28 | 1.3 | Review homework; Find limits analytically using properties of limits and other strategies; Complete classwork with partners  Answer student questions re: homework  Monitor independent practice | **Class: p. 68:** #52, 56, 62 |  |

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**Week 2**

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| **Date** | **Section** | **Lesson Objectives/The student will:**  **Instructional Strategies/The teacher will:** | **Assignments** | **Planned Assessments** |
| 8/31 | 1.1-1.3 | Review for quiz  Monitor independent practice | Selected problems |  |
| 9/1 | Assess | Take quiz; Use one-sided limits to help determine continuity of a function  Monitor assessment | **Home:** Watch 1.4 Video 1  **pp. 78-9:** #2-12 evens | **Quiz:**  **Sections 1.2-1.3** |
| 9/2 | 1.4 | Determine and discuss continuity at a point, on an open interval and on a closed interval  Answer student questions re: homework  Guide practice | **p. 79:** #14-22 evens, 28-34 evens |  |
| 9/3 | 1.4 | Determine and discuss continuity at a point, on an open interval and on a closed interval  Answer student questions re: homework  Monitor independent practice | **Class: pp. 79-80:**  # 36, 40, 44, 48, 54, 58 |  |
| 9/4 | 1.4 | Watch Video: The Great Math Mystery  Monitor students during viewing |  |  |

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**Week 3**

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| **Date** | **Section** | **Lesson Objectives/The student will:**  **Instructional Strategies/The teacher will:** | **Assignments** | **Planned Assessments** |
| 9/7 |  | No School: Labor Day Holiday |  |  |
| 9/8 | 1.4 | Identify intervals over which a function is continuous  Apply the Intermediate Value Theorem  Provide examples of application of the IVT  Monitor independent practice | **Class: pp. 80-1:** #64, 66, 70, 78, 80, 84, 92 |  |
| 9/9 | 1.4 | Review for quiz  Monitor independent practice | Selected problems |  |
| 9/10 | Assess | Take quiz; Identify “infinite limits” or where the limit does not exist because the behavior of the function is unbounded  Find vertical asymptotes of a function  Monitor assessment | **Home:** Watch 1.5 Video  p. 88 #2 - 34 every other even | **Quiz:**  **Section 1.4** |
| 9/11 | 1.5 | Evaluate limits using properties of infinite limits  Demonstrate use of properties of infinite limits  Guide practice | **Class: p. 88:** #38, 44. 48, 50, 64 |  |

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**Weeks 4 - 5**

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| **Date** | **Section** | **Lesson Objectives/The student will:**  **Instructional Strategies/The teacher will:** | **Assignments** | **Planned Assessments** |
| 9/14 | 1.5  3.5 | Evaluate limits using properties of infinite limits  Review home & classwork assignments  Demonstrate use of properties of infinite limits  Guide practice | **Class: p. 88:** #12,16,20,28,40,42,46  **Home:** Watch 3.5 Video  p. 205 #1-6 all, 14, 16 |  |
| 9/15 | 3.5 | Evaluate limits at infinity, identify horizontal asymptotes or end behavior  Review homework  Illustrate techniques to identify horizontal asymptotes in “special” cases  Guide practice | **Home:**  **pp. 205-6:** #20 – 38 evens, 46 |  |
| 9/16 | 1.5  3.5 | Review for quiz  Monitor independent practice | **Selected problems** |  |
| 9/17 | Assess | Take quiz  Begin review for unit test  Monitor assessment | **Selected problems** | **Quiz:**  **Sections 1.5, 3.5** |
| 9/18 | Review | Complete review problems for unit test  Monitor independent practice | **Selected problems** |  |
| 9/21 | Review  Assess | Ask review questions  Take part 1 of unit test  Monitor assessment |  | **Unit 1 Test:**  **Part 1** |
| 9/22 | Assess | Take part 2 of unit test  Monitor assessment |  | **Unit 1 Test:**  **Part 2** |