

## Calculus AB Schedule-- Unit 7 Applications of the Definite Integral

| <u>Date</u> | <u>Lesson</u>   | <u>HW Assignment</u>   |
|-------------|---|--|
| 22-Feb      | 8.1 Area Between Graphs   | <b>HW1</b> --p.579 #1,3,5,8,11, AP Practice #1                                     |
| 23-Feb      | 8.1 Area Between Graphs   | <b>HW2</b> --p.579 #13,15, AP Practice #2,5,9<br>(check all answers in calculator) |
| 24-Feb      | 8.1 Area Between Graphs<br><b>Black History Month Assembly</b>                  | <b>HW3</b> --p.579 #21,23, AP Practice #3,<br>Calculator #58c,59c, AP Practice #10 |
| 27-Feb      | 8.4 Volume of a Solid: Slicing  | <b>HW4</b> --p.610 #7, AP Practice #2,5<br><b>Study for Quiz 8.1</b>               |
| 28-Feb      | <b>Late Start Schedule</b><br>8.4 Volume of a Solid: Slicing<br><b>Quiz 8.1</b> | <b>HW5</b> --p.610 #8, AP Practice #3,8ad  |
| 1-Mar       | 8.2 Volume of a Solid: Disks  | <b>HW6</b> --p.593 #1,5,13,23,38,AP Practice#1                                     |
| 2-Mar       | 8.2 Volume of a Solid: Disks  | <b>HW7</b> --p.593 #6,7,15,41, AP Practice #2                                      |
| 3-Mar       | 8.2 Volume of a Solid: Washers  | <b>HW8</b> --p.593 #17,33,34,39, AP Practice #8                                    |
| 6-Mar       | <b>NO SCHOOL</b> --Pulaski Day  | <b>NO Additional Homework</b>  |
| 7-Mar       | <b>Late Start Schedule</b><br>8.2 Volume of a Solid: Washers                    | <b>HW9</b> --p.593 #10,42,50abc, AP Practice<br>#4,9, Calculator #43,53            |
| 8-Mar       | 8.2 Volume of a Solid: Disks & Washers  | <b>HW10</b> --p.593 #9,13,35,40, Calculator<br>p.593 #46                           |
| 9-Mar       | <i>Unit 7 Review (Book Chapter 8)</i>   | <b>HW11</b> --p.632 #1,5,6,8, AP Practice #1,2,7                                   |
| 10-Mar      | AP Exam Overview & M/C Test-Taking<br>Strategies                                | <b>Study for Test</b>  |
| 13-Mar      | <i>Unit 7 Review (Book Chapter 8)</i>   | <b>Study for Test</b>  |
| 14-Mar      | <b>NO SCHOOL - Teacher Institute Day</b>  | <b>NO Additional Homework</b>  |
| 15-Mar      | <b>Unit 7 Test (Book Chapter 8)</b>   | <b>AP Review Begins!!!</b>   |

# Calculus AB Schedule-- Unit 7 Applications of the Definite Integral

## Unit 7: Applications of Definite Integrals

**CHA-5**  
Definite integrals allow us to solve problems involving the accumulation of change in area or volume over an interval.

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| <b>LEARNING OBJECTIVE</b>   | <b>ESSENTIAL KNOWLEDGE</b>   |
|---|--|
| <b>CHA-5.A</b><br>Calculate areas in the plane using the definite integral.                       | <b>CHA-5.A.1</b><br>Areas of regions in the plane can be calculated with definite integrals.   |
| <b>CHA-5.A</b><br>Calculate areas in the plane using the definite integral.                       | <b>CHA-5.A.2</b><br>Areas of regions in the plane can be calculated using functions of either $x$ or $y$ .   |
| <b>CHA-5.A</b><br>Calculate areas in the plane using the definite integral.                       | <b>CHA-5.A.3</b><br>Areas of certain regions in the plane may be calculated using a sum of two or more definite integrals or by evaluating a definite integral of the absolute value of the difference of two functions. |
| <b>CHA-5.B</b><br>Calculate volumes of solids with known cross sections using definite integrals. | <b>CHA-5.B.1</b><br>Volumes of solids with square and rectangular cross sections can be found using definite integrals and the area formulas for these shapes.   |
| <b>CHA-5.B</b><br>Calculate volumes of solids with known cross sections using definite integrals. | <b>CHA-5.B.2</b><br>Volumes of solids with triangular cross sections can be found using definite integrals and the area formulas for these shapes.   |
|   | <b>CHA-5.B.3</b><br>Volumes of solids with semicircular and other geometrically defined cross sections can be found using definite integrals and the area formulas for these shapes.                                     |

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|---|---|
| <b>CHA-5.C</b><br>Calculate volumes of solids of revolution using definite integrals. | <b>CHA-5.C.1</b><br>Volumes of solids of revolution around the $x$ - or $y$ -axis may be found by using definite integrals with the disc method.  |
| <b>CHA-5.C</b><br>Calculate volumes of solids of revolution using definite integrals. | <b>CHA-5.C.2</b><br>Volumes of solids of revolution around any horizontal or vertical line in the plane may be found by using definite integrals with the disc method.                        |
| <b>CHA-5.C</b><br>Calculate volumes of solids of revolution using definite integrals. | <b>CHA-5.C.3</b><br>Volumes of solids of revolution around the $x$ - or $y$ -axis whose cross sections are ring shaped may be found using definite integrals with the washer method.          |
| <b>CHA-5.C</b><br>Calculate volumes of solids of revolution using definite integrals. | <b>CHA-5.C.4</b><br>Volumes of solids of revolution around any horizontal or vertical line whose cross sections are ring shaped may be found using definite integrals with the washer method. |