

## Homework: Test 5

Same requirements as previous homework: Write down original problem from text with instructions; show work; check your answer in the back of the book; correct any problems with incorrect answers; score yourself based on the number of problems done correctly (after you've done your check and necessary corrections).

Assign. Date	Read this section:	<p style="text-align: center;"><b>Do these problems:</b></p> <p>Note: The problems are grouped, roughly, by type.</p> <p>You may do these problems in any order you wish, but work on doing several of each type if you're unable to complete the assignment.</p>	<p style="text-align: center;"><b>Problems done correctly/ Total</b></p>
	<p><b>Section 5.1:</b> Measuring Distance Traveled</p>	<p>5.1, page 262: 1, 3, 5, 8, 9, 15, 23, 26, 27</p> <p>Note: For problems 1, 3, 8, 9 and 15, in addition to the instructions given in the problem, ALSO construct a graph showing the data points/curve and the rectangles used to make the estimates. Use different colors!</p> <p>ans. #8: lower est. = 46 m; upper est. = 120 m; ans. # 26: (a) Car A; (b) Car A; (c) Car B</p>	<div style="border: 1px solid black; width: 40px; height: 20px; display: inline-block;"></div> /9
	<p><b>Section 5.2:</b> The Definite Integral</p>	<p>Written down in class, TBA</p>	<div style="border: 1px solid black; width: 40px; height: 20px; display: inline-block;"></div> /
	<p><b>Section 5.3:</b> The Fundamental Theorem and Interpretations</p>	<p>5.3, page 277:</p> <ul style="list-style-type: none"> <li>• Interpreting the definite integral: 1, 3, 5, 6 (ans: It represents the total growth in population from 2000 to 2004 in billions of people), 7, 15, 29, 37</li> <li>• Average value of a function: 9, 31,</li> </ul>	<div style="border: 1px solid black; width: 40px; height: 20px; display: inline-block;"></div> /10
	<p><b>Section 6.2:</b> Constructing Antiderivatives Analytically</p>	<p>6.2, page 310:</p> <ul style="list-style-type: none"> <li>• Find antiderivatives: 1 – 27 odd, 37 – 63 odd</li> <li>• Review of interpretations of definite integral               <ul style="list-style-type: none"> <li>○ Area: 65, 67</li> <li>○ Average value of <math>f(x)</math>: 75, 77</li> <li>○ Net change/accumulation: 81, 83, 85</li> </ul> </li> </ul>	<div style="border: 1px solid black; width: 40px; height: 20px; display: inline-block;"></div> /35
	<p><b>Section 5.4:</b> Theorems about Definite Integrals</p>	<p>5.4, page 288:</p> <ul style="list-style-type: none"> <li>• Using the FTC: 12 (ans: 4), 13, 15</li> <li>• Using properties of definite integrals: 21, 22 (ans: 8), 23, 24 (ans: -52), 25, 29, 31, 37</li> </ul>	<div style="border: 1px solid black; width: 40px; height: 20px; display: inline-block;"></div> /11
	<p><b>Section 6.3:</b> Differential Equations</p>	<p>6.3, page 315:</p> <ul style="list-style-type: none"> <li>• First-order D.E. solutions: 1, 3, 5</li> <li>• I.V.P. solutions: 7, 9, 11</li> <li>• Applications: 17, 18, 19, 20, 21, 25, 27</li> </ul>	<div style="border: 1px solid black; width: 40px; height: 20px; display: inline-block;"></div> /13
	<p><b>Section 6.1:</b> Antiderivatives Graphically and Numerically</p>	<p>5.4, page 288: 1, 2, 3 6.1, page 303:</p> <ul style="list-style-type: none"> <li>• Construct antiderivatives: 1 – 15 odd, 19, 20</li> </ul> <p>Ans # 2: <math>3/2, 1/2, -1/2, -1, -1/2, 1/2</math> Ans # 20: (a) II is the flow rate, I is the volume; (b) I is the antiderivative of II</p>	<div style="border: 1px solid black; width: 40px; height: 20px; display: inline-block;"></div> /13
	<p><b>Section 6.4:</b> Second Fundamental Theorem of Calculus</p>	<p>6.4, page 320: 1 – 13 odd, 19, 20, 21, 23, 27, 29, 31, 35</p> <p>Ans # 20: <math>F(x)</math> increases until <math>x \cong 1.77</math>, then begins to decrease (until <math>x \cong 2.5</math>)</p>	<div style="border: 1px solid black; width: 40px; height: 20px; display: inline-block;"></div> /15
<p>Fri 5/7/10</p>	<p><b>Review for Test 5</b></p>	<p>See link on website for <a href="#">Review Sheet</a> for Test 5</p>	<div style="border: 1px solid black; width: 40px; height: 20px; display: inline-block;"></div> /
<p>Mon 5/10/10</p>	<p style="text-align: center;"><b>Test 5</b></p>		