

Math 265B: Homework 2

(Thanks go to Shelby Burnett for aligning the homework problems from the two editions of the textbook!)

Even Answers: Use Wolfram Alpha where possible (as shown in class) to check your answers.

Integration by Parts	<p>1st Edition Section 7.2 pg. 512 1, 7, 9, 11, 13, 15, 17, 23, 25, 27, 31, 33, 35, 37, 40, 47, 51, 56, 60a</p> <p>3rd Edition Section 8.2 pg. 529 1, 9, 11*, 59*, 13*, 15*, 19, 25, 29, 31, 33, 35, 37, 39, 44, 53, 57, 58*, 82a</p>
Trig Integrals (Integrands involve Trig Funcions)	<p>1st Edition Section 7.3 pg. 521 1, 2, 9, 11, 13 – 21 odd, 25, 26, 31 – 37odd, 41, 50</p> <p>3rd Edition Section 8.3 pg. 536 1, 2, 7*, 9, 13 – 21 odd, 27, 28, 33, 35, 37*, 53, 54</p>
Trig Substitution	<p>1st Edition Section 7.4 pg. 529 2, 3, 4, 5, 7, 11, 13, 16, 20, 27, 29, 31, 36, 39, 41, 53, 69bc</p> <p>3rd Edition Section 8.4 pg. 543 2, 3, 4, 5, 7, 11, 13, 50, 18, 41, 31, 33, 54, 28*, 39, 49*, 76bc</p>
Partial Fraction Decomposition	<p>1st Edition Section 7.5 pg. 540 1, 5, 15, 17, 19, 29, 33, 39, 41, 43, 46, 49, 51b, 59, 64, 65, 66, 71</p> <p>3rd Edition Section 8.5 pg. 554 1, 19, 25, 29, 27, 41, 45, 10, 12, 51, 54, 42*, 65b, 71, 77*, 79*, 81*</p>
Integration Strategy	<p>1st Edition Assorted Integration Practice pg. 572 40 – 61 (all) Identify which integration strategy you would use. Then, to check yourself, choose one problem for each strategy and do the integral. You should have one problem for: u-sub/algebra trick, integration by parts, trig, trig sub, partial fractions.</p> <p>3rd Edition Assorted Integration Practice pg. 560 From 7 – 84, choose 22 integrals and identify the strategy of integration one would use. Then choose one problem for each strategy and do the integral using the strategy you thought you should use. You should have one problem for u-sub/algebra trick, integration by parts, trig, trig sub, partial fractions.</p>
Numerical Integration	<p>1st Edition Section 7.7 pg. 556 Show steps by hand, provide a sketch, and determine whether under or overestimate on: 11, 14 By hand find Left hand sum, Right hand sum and then Trapezoidal Rule approximation from their result. Provide a sketch and determine whether each result is an over or underestimate on: 15, 18 You may use technology for the rest of these problems: 1, 2, 3, 7, 19, 23, 61</p> <p>3rd Edition Section 8.8 pg. 578 Show steps by hand, provide a sketch, and determine whether under or overestimate on: 15, 18 By hand find Left hand sum, Right hand sum and then Trapezoidal Rule approximation from their result. Provide a sketch and determine whether each result is an over or underestimate on: 19, 22 You may use technology for the rest of these problems: 1, 2, 3, 11, 27, 31, 79</p>
Math 265A Review: Limits	<p>1st Edition 265A Review p. 124 2, 29, 31, 34</p> <p>3rd Edition 265A review p. 128 4, 33, 35, 40</p>
Improper Integrals	<p>1st Edition Section 7.8 pg. 567 5 – 27 (odd), 35 – 49 (odd), 51</p> <p>3rd Edition Section 8.9 pg. 590 (7-57)* (odd), 71*</p>