

# MATH 171 – Calculus II

## MATH 171 · SUGGESTED HOMEWORK · SPRING 2018

Section	Exercises
§ 5.2: The Indefinite Integral	44,46
§ 5.3: Integration by Substitution	34,37,38,50,53,70
§ 5.5: The Definite Integral	15,19,23,24,27,28,34,37
§ 5.6: The FTC	15,17,20,21,24,26,29
§ 5.9: Definite Integrals by Substitution	15,20,22,33,38,39,40,41,42,44,45,49,53
§ 3.6: L'Hopital's Rule	7,12,18,20,23,25,27,32
§ 5.4: Sigma Notation	1,3,5,7,8,13,15,19,27,35 (we will ignore mid-point method portions)
§ 6.1: Area Between Two Curves (1)	1,3,6,7,12,13,49
§ 6.1: Area Between Two Curves (2)	4,11,14,15,16,35
§ 6.2: Volumes by Slicing	1,2,11,13,17,18,34,40
§ 6.3: Volumes by Cylindrical Shells	2,5,9,10,11,25,29
§ 6.2: Volumes by Slicing (2)	23,24,26,41,42,43,44
§ 6.3: Volumes by Cylindrical Shells (2)	4,13,16,30
§ 6.6: Work (1)	1,2,5,6,9,14,19(a)
§ 6.6: Work (2)	3,8, 15 - 18, 20,21,23
§ 7.1: Overview of Integration	1,3,4,6,8,9,10,11,14,18; & Integration Worksheet 1
§ 7.2: Integration by Parts (1)	1,5,7,9,10,11,13,14,15,17,29,35
§ 7.2: Integration by Parts (2)	18,19,21,24,25,26,30,36,38
Exam 1	
§ 7.3: Trigonometric Integrals	9,17,25,29,30,33,34,39,43,45,48
§ 7.4: Trig Substitutions (1)	3,7,11,13,19,21,23,37
§ 7.4: Trig Substitutions (2)	5,16,17,25,39,47
§ 7.5: Partial Fractions (1)	3,9,13,15,17,21,25
§ 7.5: Partial Fractions (2)	5,16,24,29,33,39
Chapter 7 Review	Integration Worksheet 2
§ 7.6: Integral Tables (1)	5,7,13,19,31,37,55,60,90
§ 7.6: Integral Tables (2)	21,23,61,64,71,93
§ 7.7: Numerical Integration (1 & 2)	1,5 (n=10 for all),25,41,43,45,52 [All problems: ignore midpoint method]
§ 7.8: Improper Integrals (1)	1,3,7,8,10,15,17,19
§ 7.8: Improper Integrals (2)	5,16,25,28,47, [read 52], 55(re-read 52a)
§ 8.1: Modeling with Differential Equations	1,3,6,7,10,13,14(b),16,19,20,35

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Section	Exercises
§ 8.2: Introduction to Differential Equations	2,6,7, 12,13,25, 29,33,35
§ 8.4: First-Order Differential Equations (1)	1,3,5,7,8,9
§ 8.4: First-Order Differential Equations (2)	21,22,23; & handout exercises
§ 8.3: Slope Fields	1,3,4,6,17; handout exercises; and § 8.4: 15,16
Exam 2	
§ 9.1: Sequences	1,4,7,9,12,13,15,17,23,25,27
§ 9.2: Monotone Sequences	3,5,7,11,17,19,21,23,24
§ 9.3: Infinite Series (1)	1a,3,5,11,13,15
§ 9.3: Infinite Series (2)	1c,2,7,9,12,14, 16(a,b), 17-20
§ 9.3: Infinite Series (3)	6,10, 28 & get caught up
§ 9.4: Convergence Tests (1)	3,5,7,9,14,15,18,23
§ 9.4: Convergence Tests (2)	11,12,17,19,21,22,31-34, Read: 36
§ 9.5: Comparison and Ratio Tests (1)	1,3,4,5,9,14,15,25,27,28,30,31,33,34,43
§ 9.5: Comparison and Ratio Tests (2)	35,36,38,40,41,44,45,46,47
§ 9.5: Comparison and Ratio Tests (3)	get caught up
§ 9.6: Alternating Series (1)	2,7,9,13-17, 21,23
§ 9.6: Alternating Series (2)	11,19,22,24,26,27,28, (read 51)
Chapter 9 Review	9.5: 37,39,53(b) 9.6: 18,20 & get caught up
§ 9.7: Taylor Polynomials	6,7,12,19,24,25,37
§ 9.8: Taylor Series	1,6,13,18
§ 9.8: Taylor Series; Power Series (1)	3,17,19,29,31,36,42
§ 9.8: Taylor Series; Power Series (2)	21,43,44,45,47,48,49,50
§ 9.10: Differentiating and Integrating (1)	5,7(a),8(a),9,11,19,21(b),27, 31(first 3 terms)
§ 9.10: Differentiating and Integrating (2)	13(a),19,22(b),26,32,36(a-d),37
Exam 3	