



MAT 201 - Calculus II Assignments

		Calculus, 8th ed, by Larson	
Section	Topic	Page	Assignment
5.1	The Natural Log Function - Differentiation	329	3,5,7,9,25,27,31,37,41,47,51,55,63,71,77,79,85,93-97 odd,105
5.2	The Natural Log Function - Integration	338	1,7,11,15,19,23,29,33,37,43,71,75,83,91,93,97,99
5.3	Inverse Functions	347	5,9,11,13,15,17,21,29,35,39,45,59,61,63,65,71,73,75,81 96,101,107
5.4	Exponential Functions	356	1,7,11,13,15,17,21,25,29,31,33,35,37,43,46,57,65,67,79,81,87,89 91,93,95,101,107,111,113,119,125
5.5	Other Bases	366	1,3,7,11,15,19,23,29,33,35,37,39,45,49,53,55,63,65,67,77,79,81 85,91,93,98
6.2	Growth and Decay	418	1,3,5,11,15,17,25,35,41,49,53,57,61,63,67
5.6	Inverse Trig Functions - Differentiation	377	3,4,9,11,15,19,23,31,41,47,49,55,61,89,91
5.7	Inverse Trig Functions - Integration	385	1,3,5,9,11,13,15,23,31,41,47,53,65,76
5.8	Hyperbolic Functions	399	1,3,15,19,23,25,39,43,49,53,57,59,73,85
	Review	399	7,11,15,19,21,29,31,39,41,49,58,59,65,69,73,79,83,91
7.2	Volume: The Disk Method	462	3,5,7,9,11,13,17 (use fnInt), 21,27,31,33,35,39,41,47,53,57
7.3	Volume: The Shell Method	472	3,5,9,13,17,19,21,23,25,27,31,43,51 b, c & d
7.4	Arc Length and Surface Area	483	3,5,7,13,17,33,34,35,36,39,43,55
	Review	573	7,13,21,25,29,30,31,35,37
8.1	Basic Integration Rules	522	5,13,15,19,23,25,27,31,37,39,41,43,59,65
8.2	Integration by Parts	531	1-4 all;11,13,15,19,23,27,33,35,39,41,47,49,51,53,71,73-78 all;99,103
8.3	Trigonometric Integrals	540	5,7,11,13,25,29,35,39,45,51,53,65,69,83,87,99
8.4	Trigonometric Substitution	548	5,7,9,13,21,23,29,33,37,43,47,51,53,70a b & c,71
8.5	Partial Fractions	559	7,11,15,19,25,29,53,57,61(volume only)
8.6	Other Integration Techniques	565	5,11,13,27,85
8.7	Indeterminant Forms & L'Hopital's Rule	574	5,7,11,15,19,23,27,31,35,39,43,51,53,55,63,69,75,77,84
8.8	Improper Integrals	585	1,5,9,11,15,19,27,31,35,39,43,49,53,55,67,73,79a,89a
	Review	589	3,5,7,13,17,23,27,35,37,41,55,59,67,75,79,87
9.1	Sequences	603	1,5,9,15,13,17,19,21,25,31,35,39,45,47,53,57,61,69,71,75,83,87 95,101,103,110
9.2	Series and Convergence	612	7,11,13,21,23,27,31,35,39,43,45,47,57,61,65,79,95,96,99,109
9.3	The Integral Test and p-Series	620	1,7,11,5,19,21,25,43,45,47,61,63,65,67,69
9.4	Comparisons of Series	628	3,7,11,15,19,23,29,31,33,35,45
9.5	Alternating Series	636	11,15,17,21,25,33,37,41,43,45,47,51,53,55,59,79,83
9.6	The Ratio and Root Tests	645	5,10,13,17,21,25,29,35,37,39,51,55,59,63,69,77
9.7	Taylor Polynomials	656	5,13,19,25,27,30,41,45,47,49
9.8	Power Series	667	7,11,15,19,23,27,35,45,49,57,58,63,65
9.9	Representing Functions with Power Series	674	5,9,11,15,17,19,21
9.10	Taylor and Maclaurin Series	685	1,3,5,25,59
	Review	688	1,5,9,11,15,17,27,29,31,33,35,37,41,45,49,57,63,65,67,69,83,97

MAT 201

ANSWERS TO EVEN NUMBERED HOMEWORK PROBLEMS

SECTION	PROBLEM	ANSWER
5.3	#96	$f(x)$ does not pass the HLT, but on $[-2, 2]$ it is 1 to 1
5.4	#46	$\frac{dy}{dx} = 1$
5.5	#98	$(1+x)^{1/x}$ approaches $2.718 \approx e$
5.6	#4	$(1, \pi/4); (-\sqrt{3}/3, -\pi/6); (-\sqrt{3}, -\pi/3)$
5.7	#76	False; $\int \frac{dx}{25+x^2} = \frac{1}{5} \arctan(\frac{x}{5}) + C$
7.4	#34	Length = 47 ft; 4700 sq ft of roofing needed
7.4	#36	1480
Ch 7 Review	#30	(a) $\pi/12$ (b) $32\pi/105$
8.2	#2	matches (d)
8.2	#4	matches (a)
8.2	#74	Yes; $u = \ln(x); dv = xdx$
8.2	#76	No. Substitution
8.2	#78	No. Substitution
8.7	#84	Hint: Take ln to both sides, then use L'Hopital's rule and differentiate to find the limit

9.1 #110

n	1	2	3	4	5
P_n	\$16,720	\$17,472.40	\$18,258.66	\$19,080.30	\$19,938.91

9.2	#96	\$37,815.75
9.6	#10	matches (e)
9.7	#30	$P_2(x) = -\pi^2 - 2\pi(x - \pi) + 0.5(\pi^2 - 2)(x - \pi)^2$