

Math 2413- Calculus and Analytical Geometry
 Calculus Early Transcendental Functions
 (Larson Edwards) 6th Edition

Sec.	Topic	Page	Problems
Preparation for Calculus			
1.5	Inverse Functions	37	2, 7, 10, 26, 31, 38, 45, 54, 74, 79, 100, 117, 124
1.6	Exponential & Log. Functions	48	4, 13, 24, 31, 35, 36, 44, 47, 48, 50, 64, 88, 89, 93, 98, 101, 120
Limits and Their Properties			
2.1	Limits and Their Properties	61	1, 3, 6, 9
2.2	Finding Limits	68	5, 7, 19, 20, 28, 31, 37, 41, 42, 45
2.3	Evaluating Limits	79	13, 17, 21, 23, 29, 31, 33, 38, 43, 45, 48, 50, 56, 59, 65, 67, 69, 76, 77, 91, 92, 113, 114
2.4	Continuity & One-Sided Limits	90	8, 11, 14, 17, 22, 27, 34, 35, 56, 70, 73, 86, 87, 93, 96, 107, 108, 119
2.5	Infinite Limits	103	4, 8, 20, 27, 38, 45, 46, 49, 52, 54, 55, 72, 73
Differentiation			
3.1	Derivative & Tangent Line Problem	116	2, 10, 19, 24, 34, 40, 42, 47, 50, 57, 62, 64, 76, 79, 84, 85, 88
3.2	Differentiation Rules & Rates of Change	126	41, 44, 45, 48, 51, 54, 55, 57, 60, 61, 66, 69, 82, 85, 102, 121
3.3	Product & Quotient Rules and Higher-Order Derivatives	139	5, 11, 26, 34, 39, 42, 47, 86, 90, 99, 102, 105, 107, 110, 119, 120, 127
3.4	The Chain Rule	150	4, 8, 26, 33, 49, 52, 55, 70, 79, 102, 111, 118, 121, 142, 153
3.5	Implicit Differentiation	165	16, 21, 23, 38, 59, 67, 70, 73, 80, 81
3.6	Derivatives of Inverse Functions	174	9, 20, 22, 25, 30, 33, 39, 44, 53, 60
3.7	Related Rates	181	1, 3, 6, 8, 9, 11, 14, 17, 22, 25, 28, 33
Applications of Differentiation			
4.1	Extrema on an Interval	202	11, 13, 14, 16, 17, 18, 24, 27, 31, 33, 38, 39, 43, 75, 77, 78
4.2	Rolle's Theorem and the Mean Value Theorem	210	11, 12, 14, 15, 16, 19, 45, 46, 47, 48, 51, 53, 76, 85, 87, 88
4.3	Increasing and Decreasing Functions & the 1 st Derivative Test	217	11, 13, 17, 22, 28, 33, 39, 48, 54, 59, 64, 65, 82, 83, 113, 117
4.4	Concavity & 2 nd Derivative Test	227	8, 10, 13, 17, 23, 28, 31, 47, 50, 53, 56, 58, 64
4.5	Limits at Infinity	242	13, 16, 18, 19, 22, 24, 27, 30, 31, 37, 38, 49, 65, 68
8.7	Indeterminate Forms and L'Hopital's Rules	564	12, 13, 16, 17, 20, 21, 24, 30, 35, 40, 44, 45, 47, 83, 84
4.6	Summary of Curve Sketching	253	2, 4, 9, 15, 18, 21, 28, 32, 37, 42, 55, 58, 63, 81, 82
4.7	Optimization Problems	262	5, 6, 13, 16, 18, 22, 24, 25, 28, 33, 34, 40, 42, 49
4.8	Differentials	267	4, 5, 8, 9, 13, 16, 20, 23, 31, 34, 36, 40, 41
Integration			
5.1	Antiderivatives & Indefinite Integration	287	9, 11, 18, 19, 23, 26, 30, 33, 35, 38, 43, 54, 66
5.2	Area	299	8, 9, 18, 21, 29, 32, 46, 50, 53, 57, 62, 74, 75
5.3	Riemann Sums and Definite Integrals	309	4, 7, 12, 24, 27, 31, 38, 39, 42, 43, 47, 57, 58, 70, 73
5.4	Fundamental Function of Calculus	324	5, 10, 13, 18, 19, 26, 27, 32, 37, 40, 45, 48, 51, 58, 59, 86, 107, 108
5.5	Integration by Substitution	337	1-6, 13, 14, 23, 24, 27, 28, 39, 40
5.7	Natural Logarithmic Function: Integration	354	1, 2, 13, 14, 21, 24, 27-30, 37, 38, 41, 42, 55, 56
5.8	Inverse Trigonometric Function: Integration	362	1, 2, 7, 12, 13, 14, 17-20, 25, 26, 35, 36, 39, 40, 43, 44
Applications of Integration			
7.1	Area of a Region Between Two Curves	442	1-8, 17-20, 23, 24, 31, 32, 35, 36, 47, 48
7.2	Volume: The Disk Method	453	1-6, 11, 12, 15, 16, 23, 24, 31, 32, 35, 36, 47, 48
7.3	Volume: The Shell Method	462	1-4, 9, 10, 15, 16, 19, 20, 23, 24
7.5*	Work	483	1, 2, 5, 6, 13, 14, 21, 22
7.6*	Moments, Centers of Mass, and Centroids	494	1-4, 7, 8, 13, 14, 27-30, 45-48
7.7*	Fluid Pressure and Fluid Force	501	1, 2, 5-10, 13, 14, 23, 2

* If time permits