Suggested Homework Problems, Math 201, Fall 2018

The Sections refer to Thomas's Early Transcendentals, 14th ed. The starred problems, as well as the "Advanced Problems" listed in each chapter, are more challenging, and optional.

Suggested Periods	Section	Topics	Problems
1	1.1	Functions and Their Graphs	3, 6, 7, 14, 17, 18, 19, 27, 47, 49, 50
1	1.2	Combining Functions; Shifting and Scaling Graphs	1, 2, 6, 9, 11, 12, 17, 20, 23, 24, 41, 43, 46, 53, 54, 60, 69, 70, 72
1	1.3	Trigonometric Functions	1, 4, 5, 13, 19, 24, 35, 55, 57, 61, 62
1	1.5	Exponential Functions	1-5, 11-20, 21, 24, 29, 31, 33
2	1.6	Inverse Functions and Logarithms	7-16, 25, 32, 33, 41, 43, 45, 49, 51, 53, 61, 67, 77, 85, 86
		Advanced Problems, Chapter 1	11, 12, 19, 20, 22, 23, 25
0.5	2.1	Rates of Change and Tangents to Curves	2, 3, 5, 7, 13, 15, 18, 23, 25
2	2.2	Limit of a Function and Limit Laws	3, 4, 5, 8, 9, 12, 22, 27, 39, 44, 50, 52, 53, 57, 60, 62, 64, 65, 78, 81
(1 opt.)	2.3	The Precise Definition of a Limit (optional)	8, 9, 16, 22, 30, 49, 57
1	2.4	One-Sided Limits	1, 5, 12, 15, 19, 36, 38, 42, 48, 49, 50
1.5	2.5	Continuity	5-10, 17, 18, 24, 29, 32, 37, 49, 56, 57, 63, 64, 65, 69
1.5	2.6	Limits Involving Infinity; Asymptotes of Graphs	3-9, 16, 17, 20, 25, 27, 29, 37, 39, 53, 57, 67, 69, 75, 81, 88, 91
		Advanced Problems, Chapter 2	3, 5, 11, 17, 21, 22, 31
2	3.1	Tangents and the Derivative at a Point	5, 7, 15, 18, 25, 28, 35, 36, 39
1	3.2	The Derivative as a Function	1, 4, 13, 23, 27-30, 32, 41, 42, 60
3	3.3	Differentiation Rules	1-8, 17, 26, 28, 35, 45, 47, 55, 59, 60, 65, 69, 70, 72, 77, 78
1	3.4	The Derivative as a Rate of Change	3, 7, 13, 15, 19, 26
1	3.5	Derivatives of Trigonometric Functions	1, 4, 7, 9, 10, 14, 22, 34, 39, 51, 53, 59, 67, 68
2	3.6	The Chain Rule	1-8, 13, 17, 21, 23, 26, 30, 35, 40, 45, 48, 79, 80, 87-89, 97, 111-113
1	3.7	Implicit Differentiation	1, 5, 16, 29, 33, 42, 45, 50, 53, 57
2.5	3.8	Derivatives of Inverse Functions and Logarithms	4, 7, 9, 15, 22, 35, 41, 46, 54, 62, 67, 70, 84, 94, 102*
1	3.9	Inverse Trigonometric Functions	1-8(?), 13, 14, 15, 17, 21, 31, 39, 42, 43, 46, 56
1.5	3.10	Related Rates	1, 9, 13, 14, 20, 22, 23, 24, 27, 28, 43, 44
1	3.11	Linearization and Differentials	6, 11, 15, 17, 20, 29, 45, 46, 47, 53, 54, 56, 57, 62, 64, 66*
		Advanced Problems, Chapter 3	4, 5, 8, 20, 32
1	4.1	Extreme Values of Functions	5, 6, 7, 15, 16, 18, 28, 33, 35, 40, 71*, 74*
1	4.2	The Mean Value Theorem	5, 15, 17, 22, 54, 63
1	4.3	Monotonic Functions and the First Derivative Test	3, 7, 14, 19, 45, 59, 64, 71*, 74*, 84*
2	4.4	Concavity and Curve Sketching	5, 9, 21, 28, 46, 55, 87, 97, 106*
2	4.5	Indeterminate Forms and L'Hôpital's Rule	7, 14, 20, 27-38, 57, 62, 67*, 71*, 77*, 85*
1	4.6	Applied Optimization	5, 7, 14, 20, 37, 44, 53, 67*
1.5	4.8	Antiderivatives	1, 6, 7, 13, 17, 19, 23, 24, 25, 27, 41, 51, 61, 67, 70, 83, 86, 91, 97, 104, 108, 113, 123
		Advanced Problems, Chapter 4	10, 15, 17, 22, 30, 36
1	5.1	Area and Estimating with Finite Sums	3, 8, 9
1.5	5.2	Sigma Notation and Limits of Finite Sums	1, 7, 14, 37, 40
1	5.3	The Definite Integral	1*, 3*, 8*, 9, 29, 47, 50, 60, 79, 86*
1.5	5.4	The Fundamental Theorem of Calculus	1, 6, 10, 18, 26, 34, 45, 52, 56, 67, 85
2	5.5	Indefinite Integrals and the Substitution Method	1, 4, 7, 9, 12, 22, 31, 34, 54, 55, 67*, 77
2	5.6	Substitution and Area Between Curves	3, 6, 13, 14, 17, 27, 39, 43, 49, 63, 69, 87, 95, 101
		Advanced Problems, Chapter 5	3, 10, 11, 23, 25, 26, 46