

Course Title: Calculus 1

Course Number: 250101

Textbook: Anton, Bivens, Davis. "Calculus: Early Transcendentals". 11th Edition. Wiley (2016).

Instructor: Feras Awad.

Selected Exercises from Chapter 0: BEFORE CALCULUS

Section Number	Section Name	Pages in the Book	Exercises
0.1	FUNCTIONS	12-15	1, 3, 4, 7, 23, 24 TF: 19, 20, 21, 22
0.2	NEW FUNCTIONS FROM OLD	24-27	1(a, b), 7, 9, 13, 17, 18, 27, 29, 59, 60, 61, 62, 63 TF: 43, 44, 45, 46
0.4	INVERSE FUNCTIONS; INVERSE TRIGONOMETRIC FUNCTIONS	48-52	1, 5, 9, 10, 11, 12, 19, 27, 35, 37, 38, 39, 41 TF: 31, 32, 33, 34
0.5	EXPONENTIAL AND LOGARITHMIC FUNCTIONS	61-63	1, 2, 5, 6, 9, 11, 13, 14, 15, 16, 17, 19, 21, 23, 30, 31, 32, 42 TF: 35, 36, 37, 38

Selected Exercises from Chapter 1: LIMITS AND CONTINUITY

Section Number	Section Name	Pages in the Book	Exercises
1.1	LIMITS (AN INTUITIVE APPROACH)	77-79	3, 5 TF: 17, 18, 19, 20
1.2	COMPUTING LIMITS	87-88	1, 2, 5, 6, 8, 9, 11, 13, 15, 19, 21, 27, 29, 31, 37, 40, 43 TF: 33, 34, 35, 36
1.3	LIMITS AT INFINITY; END BEHAVIOR OF A FUNCTION	96-100	1, 3, 5, 9, 11, 13, 14, 15, 17, 21, 23, 25, 31
1.5	CONTINUITY	118-120	12, 13, 14, 15, 17, 19, 21, 29 TF: 23, 24, 25, 26, 27, 28
1.6	CONTINUITY OF TRIGONOMETRIC, EXPONENTIAL, AND INVERSE FUNCTIONS	125-128	1, 2, 7, 9, 17, 18, 19, 23, 25, 26, 27, 29, 30, 32, 38, 39, 40, 49, 64

Selected Exercises from Chapter 2: THE DERIVATIVE

Section Number	Section Name	Pages in the Book	Exercises
2.1	TANGENT LINES AND RATES OF CHANGE	140-143	TF: 19, 20
2.2	THE DERIVATIVE FUNCTION	152-155	1, 4, 7, 9, 11, 13, 33, 47, 49 TF: 27, 28, 29, 30
2.3	INTRODUCTION TO TECHNIQUES OF DIFFERENTIATION	161-163	3, 9, 11, 13, 15, 18, 39, 41, 45, 47, 51, 52, 65, 72 TF: 33, 34, 35, 36
2.4	THE PRODUCT AND QUOTIENT RULES	168	1, 7, 11, 29
2.5	DERIVATIVES OF TRIGONOMETRIC FUNCTIONS	172-173	1, 3, 5, 7, 9, 15, 19, 25, 27, 39, 41 TF: 35, 36, 37, 38

2.6	THE CHAIN RULE	178-181	1, 3, 5, 7, 11, 15, 16, 18, 20, 23, 27, 37, 45, 47, 67, 75, 77, 78, 79 TF: 61, 62, 63, 64
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Selected Exercises from Chapter 3: TOPICS IN DIFFERENTIATION

Section Number	Section Name	Pages in the Book	Exercises
3.1	IMPLICIT DIFFERENTIATION	190-192	3, 5, 9, 13, 15, 17, 26, 27
3.2	DERIVATIVES OF LOGARITHMIC FUNCTIONS	195-196	1, 7, 9, 13, 19, 23, 27, 29, 35, 37, 39, 41
3.3	DERIVATIVES OF EXPONENTIAL AND INVERSE TRIGONOMETRIC FUNCTIONS	201-203	1, 3, 21, 27, 28, 29, 31, 32, 33, 43, 47, 51, 53, 55, 65
3.6	L'HÔPITAL'S RULE; INDETERMINATE FORMS	226-228	7, 11, 15, 16, 19, 21, 27, 28, 33, 35, 39, 40, 42, 43 TF: 3, 4, 5, 6

Selected Exercises from Chapter 4: THE DERIVATIVE IN GRAPHING AND APPLICATIONS

Section Number	Section Name	Pages in the Book	Exercises
4.1	ANALYSIS OF FUNCTIONS I: INCREASE, DECREASE, AND CONCAVITY	241-244	3, 9, 15, 17, 19, 20 TF: 11, 12, 13, 14
4.2	ANALYSIS OF FUNCTIONS II: RELATIVE EXTREMA; GRAPHING POLYNOMIALS	252-254	3, 7, 25, 29, 33, 37, 39 TF: 15, 16, 17, 18
4.3	ANALYSIS OF FUNCTIONS III: RATIONAL FUNCTIONS, CUSPS, AND VERTICAL TANGENTS	264-266	1, 3, 5
4.4	ABSOLUTE MAXIMA AND MINIMA	300-302	1, 7, 8, 9, 10, 21, 23, 25 TF: 17, 18, 19, 20
4.8	ROLLE'S THEOREM; MEAN-VALUE THEOREM	308-310	1, 2, 3, 5, 7, 8

Selected Exercises from Chapter 5: INTEGRATION

Section Number	Section Name	Pages in the Book	Exercises
5.2	THE INDEFINITE INTEGRAL	330-332	1, 9, 10, 11, 13, 15, 17, 19, 23, 25, 27, 29, 31, 32, 36, 69, 71
5.3	INTEGRATION BY SUBSTITUTION	338-340	1, 2, 5, 7, 9, 25, 26, 28, 29, 30, 31, 32, 35, 36, 37, 45, 57, 58
5.5	THE DEFINITE INTEGRAL	360-362	13, 14, 17, 19, 21, 23
5.6	THE FUNDAMENTAL THEOREM OF CALCULUS	373-375	1, 5, 6, 9, 13, 15, 21, 25, 26, 31, 59, 61, 36
5.9	EVALUATING DEFINITE INTEGRALS BY SUBSTITUTION	393-396	1, 4, 9, 11, 15, 31, 33, 39, 41, 47, 49