September, 1995

Syllabus and Problem List for Math 151, Sections 31 and 32

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Office hours for instructors will be announced.

Text *Calculus (Early Transcendentals)*, 3rd ed., Brooks/Cole, by James Stewart

Calculator A graphing calculator is required for this course. We recommend the TI-82, but any calculator with equivalent capacities can be used. Calculators or portable computers with QWERTY keyboards *cannot* be used on exams.

Date	Lecture	Reading	Topics
9/5	1	A, B, 0.1, 0.2	Organizational matters, functions & graphs
9/7	2	0.3, 0.4, 0.5	The calculator; preview of calculus
9/12	3	1.1, 1.2	Tangents & velocity; limits
9/14	4	1.3	Limit laws
9/19	5	1.4, 1.5	Continuity
9/21	6	1.6	Infinity & asymptotes
9/26	7	1.7, 2.1	Rates of change; derivatives
9/28	8	2.2, 2.3 2.4	Differentiation formulas; **Comp. Test # 1: limits**
10/3	9	D, 2.4	Trig. review & derivatives of trig. functions
10/5	10	2.5, 2.6	The chain rule; implicit differentiation
10/10	11	**First Exam** (usual class time & place)	
10/12	12	2.7, 2.8	Higher derivatives, related rates of change
10/17	13	2.7, 2.8	Linear approximations; Newton's method
10/19	14	3.1	Exponential functions
10/24	15	3.2, 3.3	Inverse functions; logarithm function
10/26	16	3.4, 3.5	Derivative of log; exponential growth
10/31	17	3.6	Inverse trig. functions
11/2	18	3.8	Indet. forms & L'Hospital's Rule; **Comp. Test #2: derivatives**
11/7	19	4.1, 4.2	Max & min; the Mean Value Theorem
11/9	20	4.3, 4.4	Monotonic functions; the first derivative test; concavity
11/14	21	4.5, 4.6	Curve sketching
11/16	22	**Second exam** (usual class time & place)	
11/21	23	4.7, 4.8	Applied max-min
11/28	24	4.9	Antiderivatives
11/30	25	5.1, 5.2	Area
12/5	26	5.3	The definite integral
12/7	27	5.4, 5.5	The Fundamental Theorem of Calculus; substitution rule
12/12	28	5.6	Logarithm defined as an integral
12/18	**Final Exam**, 4:00-7:00 PM (place to be announced)		

OVER

Suggested problem list for Math 151

Sections in chapter 0 refer to the Review and Preview chapter. The lettered sections refer to appendices.

Text *Calculus (Early Transcendentals)*, 3$^{\text{rd}}$ ed., Brooks/Cole, by James Stewart

Section	Suggested problems
0.1	7, 11, 20, 49, 51-54, 58, 60, 61, 62
0.2	3, 5, 9, 10, 24
0.3	1, 7, 18, 25, 27, 30, 34
0.4	11, 22
1.1	1, 3, 6
1.2	1, 4, 5, 8, 13, 15, 18, 21, 23, 28
1.3	1, 11, 13, 14, 15, 28, 33, 65, 66, 76
1.4	1, 4, 5, 9, 16, 29
1.5	1, 2, 13, 15, 18, 32, 33, 38, 41, 43, 50
1.6	9, 12, 15, 18, 20, 23, 35, 46, 48
1.7	3, 5, 10, 15, 16
2.1	1, 4, 10, 13, 15, 22, 31, 32, 34, 41, 52
2.2	3, 10, 19, 32, 37, 41, 46, 59, 61, 70
2.3	3, 10, 20, 21, 22
2.4	1, 6, 7, 18, 24, 29, 34, 56
2.5	5, 11, 14, 23, 36, 55, 64, 80
2.6	3, 26, 27, 42, 45
2.7	1, 5, 16, 20, 25, 30, 38, 43
2.8	3, 6, 7, 10, 17, 26
2.9	19, 26, 37, 40, 41, 54
2.10	1, 4, 9, 12, 30
3.1	3, 6, 9, 13, 16, 17, 18, 24, 25, 28, 31, 39, 41, 46, 50, 51
3.2	1-6, 15, 18, 22, 25, 28, 35
3.3	1, 12, 19, 34, 40, 53, 59, 65, 68, 69, 80, 82
3.4	4, 11, 20, 27, 46, 51, 64
3.5	3, 6, 7, 15, 16, 21
3.6	9, 10, 11, 31, 32, 34, 52, 63, 64, 66
3.8	1, 6, 9, 18, 27, 40, 53, 61, 74
4.1	1, 12, 19, 26, 40, 43, 50, 56, 69
4.2	5, 8, 19, 25, 26, 29, 36
4.3	1, 2, 8, 17, 26, 28, 29, 36, 43, 46
4.4	1, 4, 11, 20, 27, 34
4.5	1, 12, 31, 38, 39, 46
4.6	5, 12, 13, 21, 22
4.7	2, 7, 16, 25, 31, 39, 40
4.9	1, 8, 12, 15, 26, 34, 41, 43, 46, 49
5.1	1, 6, 12, 14, 25, 44
5.2	1, 6, 23, 24
5.3	5, 7, 10, 24, 27, 30, 45, 48, 49, 52
5.4	1, 6, 9, 15, 18, 25, 31, 38, 41, 52, 59, 80
5.5	1, 5, 12, 21, 30, 36, 37, 41, 44, 61, 68, 74, 81
5.6	1, 3
A	6, 7, 22, 43, 68
B	3, 10, 13, 22, 25, 35, 42
D	4, 5, 7, 10, 13, 29, 32, 37, 76
G	1, 3, 5