



## Fall 2016 Homework Exercises for M1220

These exercises are the required minimum for you to demonstrate the learning objectives of the course and the mastery of the course concepts. You are encouraged to work more exercises than those assigned. Regular practice is essential in learning mathematics. You should be prepared to spend at least two hours studying outside of the class for each hour you spend in class. Many students find that much more time is required in order to perform as well as they desire on exams. Some instructors will require homework to be submitted online. Details of how and when homework is due will be discussed in class.

**Text:** *Calculus: Early Transcendentals*, by James Stewart, 8<sup>th</sup> edition.

<u>Section</u>	<u>Problems</u>
6.2	1, 3, 4, 6, 9, 11, 15, 17, 25, 26, 39, 40, 41, 48, 49, 50, 65
6.3	3, 5, 6, 9, 12, 14, 15, 19, 29, 32, 37, 38, 39
6.4	1, 2, 3, 7, 9, 15, 17
6.5	1, 2, 3, 7, 8, 9, 12, 17, 14, 25, 26
Ch. 6 Review, p. 466:	1, 3, 5, 7, 8, 9, 10, 15, 26, 27, 31, 33
Appendix G, p. A50:	5, 6, 7, 8, 9, 10
3.11	1, 2, 5-11 all, 14, 15, 17, 18, 19, 23a,e, 28b, 29a,b,d, 30-33 all, 35, 46, 48b, 49, 51, 54
7.1	1, 2, 3, 7, 9, 10, 11, 12, 15, 17, 19, 20, 21, 26, 27, 29, 30, 31, 32, 35, 37-42 all, 48, 51, 52, 54, 73,
7.2	1, 5, 6, 7, 9, 13, 14, 15, 17, 18, 21, 23, 24, 27, 30, 33, 34, 39, 41, 42, 45, 46, 48, 55 (see #1), 57, 61, 67, 68, 69, 70 (use #68, say)
7.3	1-5 all, 7, 10, 14, 15, 18, 19, 22, 23, 24, 29, 30, 31a, 33, 35, 37, 41
7.4	1a,b, 3a,b, 5a,b, 7, 9, 13, 14, 17, 19, 22, 25, 29, 31, 39, 41, 43, 45, 48, 50, 51, 59, 61, 68
7.5	1, 3, 5, 6, 7, 8, 10, 11, 13, 14, 15, 17, 19, 20, 22, 23, 26, 27, 31, 35, 36, 41, 44, 45, 46, 52, 55, 56, 58, 61, 62 (use #59, p. 502), 65, 66, 67,
	69, 72, 74, 75, 76, 77, 78, 80, 83 (Hint: Use integration by parts on $\int e^{x^2} dx$ .)
7.6	1, 2, 3, 6, 8, 13, 14, 19, 25, 32
7.8	1, 5, 6, 7, 8, 10, 11, 13, 15, 17, 21, 22, 23, 24, 26, 29, 32, 34, 36, 37, 41, 49, 52, 54, 59, 61, 63 (This has a very interesting continuation in #27, p. 556), 76 (This shows that the definition of a two-sided type I improper integral is well-defined.)
8.1	3, 9, 10, 11, 12, 13, 15, 19, 44
8.2	7, 11, 12, 13, 17 (This is the surface area of what?), 27, 31
9.2	1, 3, 4, 5, 6, 7, 11, 21 (see #11)
9.3	1, 3, 4, 6, 9, 10, 13, 14, 17, 21, 22
9.5	1-6 all, 8, 9, 14, 23, 24, 25
10.1	1, 4, 5b, 7b, 8b, 9b, 13, 16, 17, 24, 25, 28
10.2	1, 2, 4, 5, 7, 11, 13, 15, 16, 31, 34, 41
10.3	1, 3, 6, 7, 9, 11, 12, 13, 14, 15, 16, 17 (see #65), 18, 19, 20, 21, 23, 25, 29, 32, 33, 35, 37, 65
10.4	3, 5, 7, 8, 11, 17, 19, 21, 23, 27, 31, 47
11.1	3, 4, 6, 7, 10, 12, 13, 14, 15, 17, 18, 23, 24, 26, 27, 28, 29, 31, 32, 33, 36, 37, 38, 39, 40, 42, 44, 45, 47, 48, 50, 51, 53, 79, 80
11.2	1, 3, 4, 15, 16, 17, 18, 23, 26, 27, 29, 31, 34, 36, 38, 39, 43, 44, 48, 49, 51, 52, 57, 59, 64 (see #44), 67, 81, 82, 85, 86
11.3	7, 8, 9, 10, 11, 13, 15, 16, 17, 21, 22, 28, 29, 32, 33, 34, 35, 43, (read #44. It is still unknown whether or not Euler's gamma constant is rational!), 45
11.4	3, 4, 5, 6, 7, 9, 10, 11, 12, 13, 14, 17, 21, 24, 29, 31, 31, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46
11.5	1, 3, 4, 6, 7, 11, 12, 15, 16, 17, 18, 19, 20, 23, 28, 32, 35 (use #85, p. 718), (read #36's

amazing fact)

- 11.6 1, 2, 3, 4, 5, 7, 9, 11, 14, 18, 19, 20, 21, 23, 25, 29, 30, 31, 35, 36, 37, 38, 39, 43, 45
- 11.7 1, 2, 3, 5, 8, 10, 11, 12, 19, 23, 29, 32, 33, 35 (use #48, p. 704)
- 11.8 1, 2, 5, 6, 7, 9, 14, 15, 20, 21, 23, 27, 28, 33, 39, 40, 41, 42 (use #85, p. 718)
- 11.9 1, 3, 4, 5, 8, 11, 13, 14a,c, 15, 16, 25, 37, 40
- 11.10 2, 11, 12, 13, 15, 16 (use #13), 18, 19, 21, 24, 27, 28, 31, 35, 37, 43, 51, 73, 74, 75, 76, 77, 78, 79, 80
- 12.1 5, 7, 8, 9, 13, 15, 17, 21, 22, 25, 27, 28, 31, 34, 35, 36, 37
- 12.2 3, 6a,b,c,d, 8, 9, 13, 15, 19, 21, 24, 26
- 12.3 1, 2, 5, 8, 9, 11, 13, 15, 17, 19, 23a,b,c, 29, 33, 39, 43, 45, 46, 48, 53, 54, 61, 62, 63, 64, 65
- 12.4 1, 4, 13, 16, 19, 21 - 27 all, 29, 33, 45, 47, 50
- 12.5 3, 5, 7, 9, 12, 13, 15, 19, 22, 24, 27, 31, 41, 45, 51, 63, 71, 75