

Text: Modern Differential Equations, by M. Abell and J. Braselton, 2nd Edition

Lesson	Section	Problems
1	1.1	p 9: # 2, 3, 9, 15, 18, 32, 35, 39, <b>A*</b>
2	1.1 & 1.2	p 11: # 40, 46, 49, 58, 67, 68 p 18: # 1, 2, 3, 4, 8
3	1.2 & dfield5 (omit systems)	p 20: # 9, 10, <b>B</b>
4	2.1 (omit $y' = f(y)$ )	p 31: # 2, 4, 7, 16, 34, 43, 46, 47, <b>C</b>
5	2.2	p 41: # 1, 3, 6, 16, 28, 38, 39, 40, 43, <b>D, E</b>
6	2.3 (omit Bernoulli)	p 52: # 8, 9, 11, 17, 20, 30, 33, <b>F</b>
7	2.4	p 62: # 1, 4, 9, 16, 20, 23, 37, 45, <b>G</b>
8	2.5	p 68: # 1, 6, 7, 9, 19, 20, 21, 27, <b>H, I</b>
9	2.6	Worksheet # 1
10	2.6	Worksheet # 2
11	3.1 & autonomous eqn	p 101: # 1, 4, 7, 12, 31(a)(b), <b>J</b>
12	3.2	p 109: # 1, 2, 5, 16, 18, 20
13	3.3	p 118: # 3, 5, 11, 20, 25, 26
14	4.1	p 145: # 3, 4, 7, 13, 20, 22, 38, <b>K</b>
15	4.1 & 4.2	p 146: # 25, 34 (should be $y_1(t) = t$ ), 36 p 151: # 1, 16, 18, 25, <b>L</b>
16	4.2 & 4.3 & 4.4	p 151: # 5, 10, 22 p 158: # 1, 2, 10 p 166: # 1, 11, 12
17	4.4 & operator notation	p 166: # 23, 40, 41, 42, 43, <b>M</b>
18	4.5	p 180: # 5, 13, 16, 19, 21, 43, 62(a) ← just a particular soln
19	4.5 & 4.6 (p 187 only)	p 181: # 62(b)(c), 63(a)(b) p 194: # 1, 46, <b>N</b> , Worksheet # 3
20	5.1	p 245: # 1, 5, 11, 12, 14, 15, 23(in part (b) “downward” should be “buoyant”)
21	5.2	p 246: # 24, 25 p 255: # 1, 6, 9, 14, 18
22	5.3 (just through resonance)	p 265: # 1, 7, 8, 27(“ $\omega^2 = 6000$ ” should be “ $\omega = 6000$ ”), 28(“ $\omega^2 = 6000$ ” should be “ $\omega = 6000$ ” and also “ $\omega \neq \beta$ ” should be “ $\omega = \beta$ ”)
23	6.1 & 6.2	p 297: # 2, 7, 13, 28 p 312: # 1, 5, 11
24	6.2	p 312: # 15, 16, 20, 21, 24, 26, 29, 35
25	6.3	p 321: # 1, 3, 6, 8, 15, 18, 21, 22
26	6.4	p 337: # 1, 2, 4, 13, 14
27	6.4	p 337: # 6, 7, 16, 25, 33, 35, 37, 38
28	6.5	p 345: # 1, 2, 3, 5, 25, 26
29	6.6	p 359: # 2, 3, 4, 10, 11
30	7.1 (mixture & spring mass)	p 398: # 23, 24 p 338: # 43-48
31	8.1	p 436: # 1, 2, 6, 8, 11, 16
32	8.1	p 437: # 27, 36, 48, 66, 74, 85, 88
33	8.2	p 444: # 1, 4, 10, 12, 15
34	8.3	p 457: # 2, 5, 7, 12, 13, 17, 20
35	8.3	p 458: # 30, 36, 45, 58, 65
36	8.4	p 464: # 2, 3, 8, 11, 19, 20, <b>O</b>

\* Boldface letters denote Supplementary Problems available at:

[www.math.purdue.edu/academics/courses/coursePages/fall01/ma266](http://www.math.purdue.edu/academics/courses/coursePages/fall01/ma266)