

Math 252: Recommended Practice Homework Problems

From Dennis G. Zill, *A First Course in Differential Equations with Modeling Applications*, 11th edition, Metric Version

The following exercises are not to be handed in for marking. Instead, you are encouraged to work on these selected exercises as part of your studying for the course.

Section	Exercises
1.1	1, 3, 5, 7, 33, 35
1.2	1, 3, 9, 11
2.2	5, 7, 9, 11, 13, 15, 17, 21, 23, 25
2.3	5, 7, 9, 11, 13, 17, 19, 21, 23, 29, 33 omit interval of solution for 17, 19 and 33
2.4	3, 5, 7, 9, 11, 15, 21, 23, 25, 27, 31, 33, 35, 37
2.5	1, 5, 7, 9, 11, 13, 17, 19, 23, 25, 27, 29, 37
3.1	3, 9, 11, 13, 16 (9.02 min), 19, 21, 27, 35
4.2	3, 7, 9, 11, 13, 15
4.3	3, 5, 7, 9, 11, 13, 15, 21, 23, 29, 31, 35, 43, 45, 47 (see answers next page for 43, 45 and 47)
4.4	5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 27, 29, 31, 33, 45, 48 (see answers next page for 45 and 48)
4.6	1, 5, 11, 13, 15, 17, 19, 21 (11 and 13 have hints for the integration on the website if you want to try them)
4.7	1, 3, 5, 7, 9, 11, 13, 19, 21, 23, 25, 27, 29
5.1	11, 21, 23, 25, 31, 33
6.1	27, 29 (skill-builder)
6.2	9, 11, 13, 15, 19, 21, 23
7.1	23, 25, 31, 37, 39
7.2	1, 3, 7, 13, 15, 17, 19, 23, 25, 27, 31, 33, 35, 37
7.3	1 - 17 (odds), 21 - 29 (odds), 37 - 69 (odds)
7.4	1, 3, 7, 11, 13, 23, 27, 31, 35, 37, 53
7.5	1 - 11 (odds)
8.2	1, 7, 13, 21, 23, 25, 29, 31, 35, 43 Caution: Eigenvectors are not unique. Neither are vectors P and Q. Correct answers may look different than what appears in the back of the book.
8.3	13, 15, 17, 19

- Sec 4.3: 43 a), f) because they have at least one exponential growth term
45 e) because it has a decaying sine wave
47 d) because it is a sine wave with period 2π
- Sec 4.4: 45 (v) because curve is $y = \text{sine curve} + e^x \sin x$ curve
48 (i) because curve is $y = \text{constant} - \text{cosine curve}$