

MAT-235: HOMEWORK FINAL

NOT DUE

Book Problems

Get experience for the final by working on the following problems from the class book [1]:

Section 7.1: 3, 4, 9, 17, 19, 21, 28, 30, 32

Section 7.2: 5, 7, 9, 27, 28

Section 7.3: 27, 28, 29, 30, 31

You should be able to prove Theorem 1–2 from Section 7.1, Theorem 1 and the Corollary from Section 7.2, Theorem 1 from Section 7.3, and Theorem 1 of Section 7.5. In addition, you should be able to solve the initial value problem

$$x'' + 2x' + 4x = f(t); \quad x(0) = 0, \quad x'(0) = 0,$$

where $f(t)$ is defined in problems 11–15 of Section 7.5.

References

- [1] C. H. Edwards, D. E. Penny, and D. T. Calvis, *Differential equations and boundary value problems, computing and modeling*, 5th ed., Pearson Education, Upper Saddle River, NJ, 2019.