

Math 244, Suggested Review Problems for the Final Exam

The following are good problems for review. If a given subsection is pretty clear to you, go ahead and move to another section.

- Chapter 1 (First Order DEs):
11-17, 21-29, 41-44, 49, 46, 48, 50, 53, 54
- Chapter 2 (Vector fields)
1-11, 15-16, 23-29
- Chapter 3 (Linear Systems)
All are good, choose several in each section.
- Chapter 4 (Mass-Spring with Forcing)
1-3, 11-13, 15-22, 23, 24-27
- Chapter 5 (General Nonlinear Systems)
1-5, 15-18, 25(a,b), 26
- Chapter 6 (The Laplace Transform)
We didn't cover the "poles" of the transform, but I don't see any of those in the Chapter Review. Choose a wide assortment of these to try!
- Appendix B (Power series solutions)
1-8

General Techniques

Also for review, be sure you can do partial fractions, integration by parts using a table, and "complexification" for the method of undetermined coefficients, integrals and trig identities. Be able to convert a complex number to its polar form ($re^{i\theta}$) and be able to use Euler's Formula.