Math 3280 Edwards and Penny Chapter 10 Reading Notes.
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Chapter 10: Laplace Transforms

- Sec. 10.1: Read through Example 2. Skip the gamma function discussion through Example 3. Read theorem 1. Skip example 4. Read Examples 5,6, Inverse Transforms and Piecewise Continuous Functions through Example 8. Skip the rest of the section.

- Sec. 10.2: Read only through Example 5. We will figure out the same transforms done in examples Examples 4 and 5 later using a slightly different technique.

- Sec. 10.3: Read the whole section, but you need only skim Examples 5 and 6. I will not ask and questions on either Test 3 or the final that would require taking the inverse Laplace transform of P(s)/Q(s) where Q(s) has repeated quadratic factors that correspond to complex roots.

- Sec. 10.4: There is only about one page that you should know, the "Differentiation of Transforms" section through Example 3 (P 589 in 4th edition, pp 612-613 in the 3rd edition). Skip Example 4. Skim Example 5 - this is a NONconstant coefficient linear differential equation. It is interesting because the transformed equation is a first order differential equation, not a purely algebraic equation. But a first order differential equation in s is still easier to solve than the original second order differential equation in t. Read also the proof of Theorem 2 on p.592 in the 4th edition (p. 616 in 3rd edition).

- 10.5: Read carefully through Example 4, including the proof of Theorem 1. The rest of section is on the Laplace transforms of periodic functions. Great material, but we will not be covering it.