

To do List

1. Check solutions to worksheet (03/20)
2. Watch Examples 6 and 7 and make detailed notes
3. Read and make notes from the summary of the method of undetermined coefficients
4. **NOTE:** I will not collect the worksheet problems. These problems are meant to check your understanding and generate questions to ask me during office hours if you get stuck.

Objectives

By the end of this lecture you should be able to

1. Use the method of undetermined coefficients to solve non-homogeneous problems for rhs that consist of products, sums and differences of exponential, trigonometric and polynomials.
 2. Write detailed solutions to the problems below in your notebook.
1. Find the form for a particular solution to

$$y'' + 2y' - 3y = f(t) \text{ and } y'' - 2y' + y = f(t)$$

where $f(t)$ equals

- (a) $2te^t \sin t$
- (b) $t^2 \cos \pi t$
- (c) $5e^{-3t}$
- (d) $t^2 e^t$

Note: You do not need to actually find the particular solution, just write down the form of the particular solution as I did in Example 7

Additional Reading/ Examples

Section 3.5 pages 138 –141