

## Exam 3 Review

The third exam will be on **Wednesday, May 10<sup>th</sup>**. The in-class portion will cover sections 4.6, 5.1, 6.1, and 7.1-7.3. The exam will consist of questions worth various values for a total of 125 points. You may use one 3" by 5" notecard (no specific examples). Prepare well and good luck!

You will need to be able to:	
1.	Solve nonhomogeneous DEs using the method of variation of parameters.
2.	Solve spring/mass systems involving free undamped motion, free damped motion, and driven motion. Express the solution in the form $x(t) = A\sin(\omega t + \phi)$ .
3.	Find the interval and radius of convergence of a given power series.
4.	Use the definition to find the Laplace transform of a function.
5.	Use the table of Laplace transforms to find transforms and inverse transforms.
6.	Use the Laplace transform to solve linear DEs.

Chapter 4 Review Exercises, pages 190-191: # 25, 26, 38

Chapter 5 Review Exercises, pages 228-229: # 1 – 3, 8, 12, 14, 15, 16, 19

Section 6.1, page 237: # 2, 8

Chapter 7 Review Exercises, pages 320-322: # 1, 7-10, 13-15, 17, 21, 33

Section 7.1, page 280: # 14, 16

Section 7.2, page 289: # 4, 20, 26, 32, 38

Section 7.3, page 297: # 16, 28