Math 207 Week 4-5 Newsletter – Dr. Loveless

UPCOMING SCHEDULE:
Friday: Section 3.4/5: Reduction of order & Undetermined Coeffiencts
Monday: Section 3.5: Undetermined Coefficients
Wednesday: Section 3.7: Mass-Spring Systems (Free Vibrations)
Next Friday: Section 3.7: Free Vibrations Continued

HOMEWORK: HW 5 Closes Tuesday (it covers 3.1 and 3.3). Please, please check out hints and post questions on the discussion board HW 5 Discussion Board. HW 6 is a bigger assignments (it covers 3.4 and 3.5 which are longer methods), please start early and check out the HW 6 Discussion Board.

NEW POSTING: Here is the link again to Dr. Loveless review materials page.
In particular check out the materials..
   1. Overview and Practice with basic ideas of 3.1, 3.3 and 3.4
   2. Review of 3.4 (you'll want to check out the last several pages on reduction of order to help with a couple homework problems if you are stuck)
   3. Detailed review of the method of undetermined coefficients (section 3.5) with practice problems
   4. Intro on the set up for 3.7/3.8 Mass-Spring systems (examples included)

Also, I have some "skill review" sheets that I think will help you….
Skills Review – Everything you need to know about solving 2-by-2 linear systems (for finding constants)
Skills Review – Working with and graphing sums of Sine and Cosine waves
Skills Review – Working with complex numbers

OLD EXAMS: Exam Archives: Personal Exam Archive and Department Exam 2 Archive
Here is some targeted practice on the current material from these archives (see previous newsletters for targeted practice on previous topics)…

Practice for 3.1, 3.3, and 3.4 (Solving Homogeneous Linear Second Order Equations):
         Problem 4(b) from Loveless Spring 2016 Exam 2
         Problem 1 from Loveless Spring 2015 Exam 2 (use gamma = 12, we won't know how to find this until 3.8)
         Problem 5 from McMurdie Summer 2011
         Problem 1 from Winter 2018 Department Exam 2 Archive Exam #1
         Problem 1 from Winter 2018 Department Exam 2 Archive Exam #2

Practice for 3.4 (Reduction of Order):
         Problem 5(b) from Loveless Spring 2016 Exam 2
         Problem 5 from Loveless Spring 2015 Exam 2
         Problem 4 from Caday Winter 2013 Exam 2
         Problem 3 from Grigg Winter 2011 Exam 2

I will post additional practice problems for 3.5 and 3.7 in my newsletter next week. But you will see as you look through old exams that there are plenty of nonhomogeneous equations (which is section 3.5), so you can find plenty of additional practice yourself by flipping through old exams.

I hope this helps!

- Dr. Andy Loveless