

Math 270 Midterm #2 Review Sheet

By: A collection of springs

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Hi kids. We are a collection of springs that are here to bring you a review sheet about the upcoming exam. We're mad at Corey, but we didn't want to take out our aggression on you students. See, Corey has skipped sections 4.2 and 4.4 for until later. These sections have a lot to do with the mathematics of springs and motion and we're upset that we aren't getting what we deserve! Anyway. Here is a review of just section 4.3, it will be the only additional section that the midterm will cover that the quiz didn't. ROCK ON!

1. Section 4.3: 2nd order linear homogeneous equations. This section is pretty good. It's the first section where we set out to find a fundamental set of solutions, and you can expect Corey to ask a question (or more) about this section. This section asks you to find a fundamental set of solutions to the equation $y'' + py' + qy = 0$, where p and q are constants. If you recall, what one does is to find the associated *characteristic equation* (see page 151, or the notes) and from there find y_1 and y_2 . There are three cases, depending on the roots of the characteristic equation, and we springs reluctantly refer you to page 156 for a summary. Please keep in mind that Corey covered these cases in a different order than what appears in the shaded box on that page. All of the assigned homework questions are excellent practice for the exam.
2. General suggestions. This quizzes looked pretty good, and so much like your last midterm review, we suggest that you learn from the mistakes you made on the quiz and review section 4.3 for the exam. As before, the second exam will look a lot like the second quiz, with this additional information. Good luck, and be sure to contact Corey if you have any questions.

ROCK ON!!!!