

MATH 114-003 FALL 2013 MIDTERM 1 GUIDE

BASICS

There will be neither notes nor calculators allowed for this particular midterm. The length of the midterm will be 80 minutes. The midterm will be given from 5:00 pm - 6:30 pm in CHEM 102. An alternate midterm will be given the same day from 1:30 pm - 3:00 pm in DRL A1 - for those of you who have already emailed me of a conflict.

FORM

Math 114-003 Midterm 1 will be half multiple-choice and half exercises whose work will also be graded. Multiple-choice problems will be graded purely for correctness. Exercises will be graded on the basis of work shown and the answer given. Problems with correct solutions but incorrect justifications or derivations will be marked off, just as problems with incorrect answers but some correct steps may be given partial credit.

CONTENT

Multiple-choice problems will test you on your conceptual knowledge of the constructions as well as your ability to solve concrete homework-like problems. The exercises will test you more in-depth on homework-like problems. The website

<http://hans.math.upenn.edu/ugrad/calc/m114/oldexams.html>

contains old finals; problems in the style of such final problems and assigned homework give a good idea about the types of problems you will be asked to solve in the midterm.

Chapters. The midterm will cover Chapters 12 and 13 only. The midterm will not expect students to have memorized definitions for torsion (13.5), derivations and formulations of Kepler's Laws, or the particular names of quadrics (e.g. hyperboloid of two sheets or hyperbolic paraboloid). However, students are expected to answer relevant questions related to quadrics that are presented in the form of equations.

Prerequisites. Students are also expected to have mastered any prerequisite material for this course. For example, students should know the values of the trigonometric functions on $\pi/3+n\pi$, $\pi/6+n\pi$, $n\pi/2$, $\pi/4+n\pi$ for $n = 0, 1, \dots$, should know how to calculate derivatives, and should know basic techniques of integration (u, v substitution, antiderivatives for polynomials and \sin, \cos, e^x), and be familiar with conic sections (11.6).

INTEGRITY

Midterms are to be taken individually with no help, human or otherwise. This means that students cannot refer to calculators, notes, books, or the work of other students while taking the exam. Violating this rule undermines the learning process for the individual student and unfairly penalizes the vast majority who do not cheat. To clarify any further doubts regarding acceptable student conduct, please contact me or consult with the Code of Academic Integrity, found at <http://www.upenn.edu/ct1/>. While the alternate and regular midterms will be different, students taking the alternate exam should not share information about that exam with students taking the later exam.