

MATH 129 FINAL EXAM INFORMATION – SPRING 2014

PROCEDURES

- The final exam is on Monday May 12, from 8:00 – 10:00 am. Do not be late. You will not be given additional time if you arrive after 8:00 am. We recommend arriving 15 minutes early.
- If you use DRC testing accommodations, you should arrive 15 minutes early to the DRC testing room.
- The final exam is not given in your usual classroom. You will find the room assignments at <http://math.arizona.edu/academics/courses/finals>. You will not be allowed to take the final in a room other than the one assigned to your section.
- You will not be allowed to leave the exam room until 9:00 am.
- Because several sections will be in the same room, students in each section will need to sit together. Additional directions will be given at the test site.
- All cell phones and electronic devices that transmit wirelessly must be turned off during the exam. Vibrate or silence modes are not allowed. Laptops, iPods, language translators, or any devices that can receive a wireless signal are not allowed.
- Bring your graphing calculator. Models that can perform symbolic calculations (also known as CAS) are NOT allowed on final exam. CAS models include (but are not limited to) the TI-89, TI NSpire CAS, HP 50g, and Casio Classpad 330. Students are not allowed to share calculators during the exam.
- Bring a picture ID.

ABOUT THE FINAL EXAM

- An updated final exam study guide is posted at <http://math.arizona.edu/~calc/m129.html>. Although the questions in the guide are not samples of actual exam questions, they provide an excellent review of the topics that are covered on the exam. Problems at the end of each chapter in the Review Exercises can also provide extra practice and review.
- No formula sheets or notes of any kind are allowed.
- The integral table and Taylor series table posted at <http://math.arizona.edu/~calc/m129.html> will be provided. You are encouraged to use these on any applicable questions unless instructed otherwise. Substitution and algebraic techniques such as factoring, completing the square and long division may be needed before using a formula on the integral table.
- Except where noted, you must show all work clearly to get credit. Your final answer must also follow from your work even if your answer is correct.
- Most questions have a show all your work format. Pay close attention to the instructions in the questions. For example: “set up, but do not evaluate” means you should not waste time computing the integral after setting it up.
- Some questions might have a multiple choice, short answer, matching, or True/False format. These formats are usually reserved for answers that would normally be marked as all right or all wrong with no partial credit.
- The wording and notation used in the questions are consistent to what is found in the text and the final exam study guide.
- Unless specifically asked to estimate, your final answers should be given in exact simplified form. For example: If your answer is $\ln 2$, don't write 0.693. On the other hand, if your answer is $\cos(\pi/4)$, we expect you to write $\sqrt{2}/2$ or $1/\sqrt{2}$.

- You should not use approximation techniques unless specifically asked to do so. For example: don't use the built-in numerical integration feature on your calculator if the Fundamental Theorem can be used to evaluate a definite integral.
- Questions could incorporate information from several chapters. For example: a volume problem from chapter 8 could involve the evaluation of an improper integral from chapter 7.
- Units should be included in your answers for all questions involving units.
- Any function type can appear: polynomial, rational, exponential, logarithmic, trigonometric (all six), inverse trigonometric (arcsin, arctan), and piecewise defined.
- Functions can be given in any form: tables, graphs, equations, words. Equations could also include parameters.
- You need to know the following integration techniques: substitution, integration by parts, the method of partial fractions, and trigonometric substitution.
- You should be able to find the Midpoint and Trapezoid rules for a small choice of n . You should be able to determine when the Midpoint and Trapezoid rules provide under or over estimates.
- You need to know the following geometry formulas: volume of a cylinder and box; area of a rectangle, triangle, and circle; Pythagorean Theorem. You need to be able to set up ratios for similar right triangles.
- You need to know the physics application of work. There will be no questions about force of a liquid on a surface.
- You need to know the integral, ratio, and alternating series tests for convergence of a series.
- You need to be able to make comparisons of improper integrals and infinite series using $\int \frac{1}{x^p} dx$ and $\sum \frac{1}{n^p}$, respectively.
- You need to know terminology such as Riemann sum, the method of slicing, initial value problem, slope field, and equilibrium solution.
- There will be no questions that require the specific use of a calculator program (such as Allsums or Slopefield). There will be no questions involving complex numbers or Euler's Formula.