

# Math 15, Exam 2, Sep 30, 2004

## Instructions

Calculators may be used on this exam.

However, if a problem does not say to use a calculator, then you must show your work in order to receive credit.

1. Be sure to print your name and your instructor's name in the space provided.
2. Work all problems. Show all work. Full credit will be given only if work is shown which fully justifies your answer.
3. There will be sufficient space under each problem in which to show your work.
4. Circle, box, or underline each final answer.
5. This exam has 4 sheets of paper (front and back). There are 100 points. Refer to the table given on the front page of the exam for the exact point distribution.
6. Turn off your cell phone if you have one with you.

## Get ready for the exam

1. Some formulas will be supplied (see back of this page). You are asked to remember other formulas and techniques from Chapters 7 and 8 and Math 14.
2. Problems will be the same as homework problems assigned from Chapter 8.
3. You should be able to do all of the following:
  - a. Use integration by parts.
  - b. Integrate combinations of trigonometric functions.
  - c. Perform trigonometric substitution.
  - d. Use the method of partial fractions to integrate rational functions.
  - e. Determine whether an integral is convergent or divergent.
4. Required skills from Math 14, Algebra, Trigonometry:
  - a. Find areas and volumes using calculus.
  - b. Know how to integrate by changes of variables.
  - c. Trigonometric identities.
  - d. Long division.
  - e. Complete the square.

