

MA 2733

Mock Examination – September 24, 2012

Name \_\_\_\_\_

5 T/F, 2 long answer. 50 points.

**General Instructions:** Please answer the following, without use of calculators.

You may refer to a 3x5 card, but no other notes. Correct answers without correct supporting work may not receive full credit (excluding the True/False section).

You may use the back of each page for additional answer space (please clearly indicate if you have done so), or scratch work.

**Mississippi State University Honor Code:** “As a Mississippi State University student I will conduct myself with honor and integrity at all times. I will not lie, cheat, or steal, nor will I accept the actions of those who do.”

Signature \_\_\_\_\_

1. True/False. Enter T or F in each blank. A correct answer is worth 2 points, a blank space is worth 0 points, and a wrong answer is worth -2 points. (Your total on this problem will be rounded up to zero if necessary.)

(a) \_\_\_\_\_  $2 + 2 = \infty$ .

(b) \_\_\_\_\_ If  $\mathbf{v}$  is a vector, then  $\mathbf{v}$  is a vector.

(c) \_\_\_\_\_  $\frac{d}{dx} \cos x = \sin x$ .

(d) \_\_\_\_\_ MA 2733 is a great class.

(e) \_\_\_\_\_ MA 2733 is the greatest class.

## 2. Poetry

(a) (6 points) In free verse, write a poem about how calculus makes you feel. For full credit, include an allusion to the Fundamental Theorem of Calculus.

(b) (6 points) In the form of an Old English heroic poem, extoll the virtues of dot products and cross products.

## 3. Rote arithmetic

(a) (6 points) Add up all the numbers from 1 to 1000.

(b) (6 points) Add up all the numbers from 1 to 10,000.