

UNIVERSITY OF REGINA  
DEPARTMENT OF MATHEMATICS AND STATISTICS  
MATH 103 200710 Quiz 4  
Tuesday, April 10, 2007

Time: 20 minutes

Instructor: Dr. Edward Doolittle

Name: \_\_\_\_\_

Student #: \_\_\_\_\_

Please do both problems 1 and 2. Each problem is worth 10 marks. You have 20 minutes to finish the quiz.

1. One thousand dollars is deposited in a savings account at 6% interest compounded continuously.

(a) How many years are required for the balance in the account to reach \$2500?

(b) How fast is the balance in the account increasing at the moment when the balance reaches \$2500?

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2. Differentiate the function  $y = \ln[(x^2 + 3)(x^3 + 1)^{-1}]$ . Hint: one way to solve this problem is to use properties of the logarithm to simplify the expression before differentiating.