

MATH 234 AL1 QUIZ #4

TUESDAY, SEPTEMBER 25TH, 2007, 8AM

Name: _____

Show all work for full credit.

Problem 1 (2 pts each). Evaluate the following statements as true or false. If they are false give a counter-example for justification.

(1) Every continuous function is differentiable.

(2) Every differentiable function is continuous.

Problem 2 (2 pts each). Compute the derivatives of the following functions.

(1) $f(x) = \frac{x}{x^2 + 1}$

(2) $g(x) = 3\sqrt{x^2 - 1}$

(3) $h(x) = x^2(2x + 3)^3$