

MATH 234 AL1 QUIZ #7

TUESDAY, OCTOBER 23RD, 2007, 9AM

Name: _____

Show all work for full credit.

Problem 1 (1 pt each). Calculate the following values exactly where $b > 0$ and $b \neq 1$.

(1) b^0

(2) $\log_b 1$

(3) $\log_b (b^n)$

(4) $\log_3 \sqrt{3}$

(5) $\frac{\ln 9}{\ln 3}$

(6) $16^{\frac{3}{4}}$

Problem 2 (2 pts). Suppose that you invest 1000 at a 5% annual interest rate. How long does it take your investment to double if the interest is compounded continuously? (You can leave your answer in terms of a logarithm.)

Problem 3 (1 pt each). Find the derivatives of the following functions.

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

(2) $g(x) = \ln(x^2 + 1)$