

Name: _____

Math 32, Spring 2010, Section 101
Quiz 6

(1) (3 pts) Find the domains of the following functions.

a) $f(x) = \log_{10}(3 - 4x)$

b) $g(x) = \ln(x^2)$

c) $h(x) = \log_3(e^x + 1)$

(2) (3 pts) Simplify the expression as much as possible by using the definition and properties of logarithms.

a) $\log_{10} 70 - \log_{10} 7$

b) $2^{\log_2 5} - 3 \log_5 \sqrt[3]{5}$

c) $\log_2(8) \cdot \ln\left(\frac{1}{e}\right)$

(3) (4 pts) Solve the inequality $\log_2 \frac{2x - 1}{x - 2} < 0$. For full credit, be sure to check the domain.