

Math 115 Section 03 (Barsamian) Quiz 10
Ohio University, Thursday, 4 November, 2004

Name (print): _____

$$\text{Q10: } \frac{\quad}{20} \quad \text{Attendance: } \frac{\quad}{43} \quad \text{Quizzes: } \frac{\quad}{200} \quad \text{Exams: } \frac{\quad}{200} \quad \text{Course: } \frac{\quad}{443} = \quad \% =$$

Calculators are not allowed on this quiz.

1 (1 point each) (No calculators)

(a) $\log_4(64) =$

(b) $\log_9(3^{10}) =$

(c) $e^{\ln(7\pi)} =$

(d) $e^{7\ln(\pi)} =$

2 (2 points each) Solve for x . (Show your work. No calculators.)

(a) $\log_2(x) = 3$

(b) $\log_5(3x + 7) = 2$

(c) $\log_x(8) = 3$

(d) $2\ln(x) = \ln(4) + \ln(x + 3)$



3 (2 points) Sketch the graph of the function $f(x) = \log_2(x-3)$. (Show your work. No calculators.)

4 (6 points) A bacteria culture starts with 500 bacteria and the population doubles every 5 hours.

(a) Find an expression for the number of bacteria after t hours. (Show your work. No calculators.)

(b) Find the number of bacteria that will be present after 8 hours. (Show your work. No calculators.)

(c) When will the population reach 5,000 bacteria? (Show your work. No calculators.)

