

Quiz 4 - MATH 151

DATE: Week 5, February 11 - 15

INSTRUCTOR: George Voutsadakis

Read each problem **very carefully** before starting to solve it. Each problem is worth 5 points. It is necessary to show **all** your work. Correct answers without explanations are worth 0 points.

GOOD LUCK!!

1. (a) Convert the following expressions from exponential to logarithmic form or vice-versa, as appropriate:
 - i. $\log_{1/3} x = -4$ (1 point)
 - ii. $c^{-3} = 16$ (1 point)(b) Find the values of x and y if $\log_3 x = -4$ and $y = \log_{1/4} 64$. (3 points)
2. Write the following expression as a single logarithm: $5 \log_{1/3} (x^4 + 3x) - \frac{1}{3} \log_{1/3} (x^2 + 1)$. (5 points)