

## 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.  $\log_3 x = 11$  (1 point)
  - ii.  $a^{15} = 35$  (1 point)(b) Find the values of  $x$  and  $y$  if  $\log_5 x = 3$  and  $y = \log_{1/2} 32$ . (3 points)
2. Write the following expression as a single logarithm:  $\frac{1}{2} \log_5 (x^3 + 1) - 2 \log_5 (2x - 1)$ . (5 points)