

QUIZ 5 - MTH 163 - 10 points

Name: _____ Date: _____

Instructions: Solve the following. Remember to show all work in order to receive full credit.

1. In the same coordinate plane graph

$$F(x) = 2^{-x} \text{ and } G(x) = 4^x.$$

2. Evaluate the following:

a) $\ln e^{-3}$

b) $\log 1.72$

c) $\log_3 7$

3. Write the expression as the logarithm of a single quantity.

$$3(\ln x - 2 \ln (x^3 - 1)) + 4 \ln 5$$

4. Expand the expression as the sum, difference and/or multiple of logarithms.

$$\log \frac{5y^3}{x^2}$$

5. Solve the following equations.

a) $2 \ln x = 14$

b) $\log_2 x + \log_2 (x + 2) = \log_2 (x + 6)$

c) $e^x = 8$

d) $5^x = 7$

6. A deposit of \$ 1,000 is invested at 8.5%. If the interest is compounded continuously what is the balance in 5 years?

- REMEMBER after QUIZ # 6 there will be an exam in the TESTING CENTER
- EXAM # 3 will include concepts from Quizzes # 5 and # 6