

# Reading Quiz 06 for Calculus 3096

Name : \_\_\_\_\_ Student ID # : \_\_\_\_\_ Score : \_\_\_\_\_

Read chapter 4 one more time.

1. What is the Euler's number  $e$ ?

2. State the differentiation formulas for each of the following functions:

(a)  $f(x) = e^{kx}$

(b)  $f(x) = e^{g(x)}$

(c)  $f(x) = \ln g(x)$

3. State the four algebraic properties of the natural logarithm function in page 252.

4. Use the logarithmic differentiation in page 254 to differentiate the function

$$f(x) = (x^2 - 4)^3(2x^2 + 5)^5.$$