Reading Quiz 04 for Calculus A

 Name : ______
 Student ID # : ______
 Score : ______

Read section 9 of chapter 3 and section 1 of chapter 4.

1. What is the linearization L(x) of a function f(x) at a point x = a? What is required of f at a for the linearization to exist? How are linearizations used? Give example.

2. If x moves from a to nearby value a + dx, how do you estimate the corresponding change in the value of a differentiable function f(x)?

3. What can be said about the extreme values of a function that is continuous on a closed interval?

4. What does it mean for a function to have a local extreme value on a domain? An absolute extreme value? How are local and absolute extreme values related, if at all? Give examples.

5. How do you find the absolute extrema of a continuous function on a closed interval? Give examples.