

Math 233 - Quiz 8

October 26, 2023

Name _____

Score _____

Show all work to receive full credit. Supply explanations when necessary.

1. (3 points) Suppose you were given a function $w = f(x, y, z)$. Name two third-order mixed partial derivatives that you would expect to be equal, and state the condition(s) under which they will be equal.

2. (7 points) Use differentials to approximate the change in

$$T = \frac{2\pi\sqrt{L}}{\sqrt{g}}$$

as (g, L) changes from $(32, 2.5)$ to $(32.03, 2.48)$.