

MATH 251 – QUIZ 4

Question 1: (5 points)

Use linear approximations **OR** differentials to find an approximate value of:

$$\sqrt{(4.01)^2 + 9e^{-0.02}}$$

Question 2: (5 points)

Find $\frac{\partial z}{\partial s}$ at $s = 1$ and $t = -2$, where

$$\begin{cases} z = x^2 + xy^2 \\ x = st \\ y = s^2 + 1 \end{cases}$$