

King Fahd University of Petroleum and Minerals

MATH 101 QUIZ #4 Term 181

Name:

Sec:

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Q1. If $\tan(x - y) = \frac{y}{1+x^2}$, find $\frac{dy}{dx}$.

Q2. Use logarithmic differentiation to find the derivative of $f(x) = x^{\sin x}$

Q3. If a ball is thrown vertically upward, then its height after seconds is $s = 80t - 16t^2$.

(a) What is the maximum height reached by the ball?

(b) What is the velocity of the ball when it is 96 above the ground on its way up? On its way down?