

KFUPM

Math101

Quiz#3

Sec.#12

Name:

Serial#:

Q1. Find the values of A and B that make f differentiable everywhere.

$$f(x) = \begin{cases} x^2 & \text{if } x \leq 2 \\ Ax + B & \text{if } x > 2 \end{cases}$$

Q2. Find the limit $\lim_{x \rightarrow 0} \frac{\sin 2x}{2x - \tan x}$