KFUPM | Term 161 | Date: 19/10/2016

Mathematics & Statistics | MATH 101 | Duration: 15 minutes

Quiz# 2

Name: ID #: Section: 4 Serial #:

1. Find the values of k such that the given function is continuous or has a removable discontinuity

$$f(x)=\begin{cases} k(k+2) & , \text{ if } x=1 \\ k^3x & , \text{ if } x>1 \\ 3k^2x^2-2kx & , \text{ if } x<1 \end{cases}$$

2. Let $f(x)=\begin{cases} 5-x & , x<4 \\ \frac{1}{5-x} & , x\geq 4 \end{cases}$. Use limits to find points of undifferentiability (if any) and justify your answer in detail.