

King Fahd University of Petroleum & Minerals
Department of Mathematics and Statistics
(Semester 181) Math 101 Quiz # 1

Name: _____ I.D. # _____ Sr. # _____

1. Given $f(x) = \begin{cases} \frac{x}{\sqrt{1+3x}-1} & \text{if } x > 0 \\ Ax^2 - 2A & \text{if } x \leq 0 \end{cases}$, find A such that $\lim_{x \rightarrow 0} f(x)$ exists.
2. Given $f(x) = \lceil x \rceil + \lceil -x \rceil$, evaluate $\lim_{x \rightarrow -3} f(x)$ if it exists.