

King Fahd University of Petroleum & Minerals

Department of Mathematical Sciences

Math 101 (Term 051) Quiz # 2

Name

ID#

Q1) Consider the function

$$f(x) = \begin{cases} \frac{\sqrt{x^2 + 1}}{x}, & x < 0 \\ \frac{2x + 3}{1 - x}, & x > 0 \end{cases}$$

Find

(a) $\lim_{x \rightarrow +\infty} f(x)$

(b) $\lim_{x \rightarrow -\infty} f(x)$

Q2) Find value of δ for $\varepsilon = .01$ such that $\lim_{x \rightarrow 1} 3 - 2x = 1$