King Fahd University of Petroleum and Minerals
Department of Mathematics and Statistics
Math 101 (172) Sec 08 - Quiz 01

Name: ID: Serial No.:

1. $\lim_{x\to-\infty} \dfrac{x+3}{\sqrt{9x^2-5x}} =$

2. $\lim_{x\to 2^+} \dfrac{1-x}{2-x} =$

3. Given that $f(x) = 1 - 3x$. Find the largest δ such that if $|x-1| < \delta$, then $|f(x)+2| < 0.6$

4. Find the horizontail(s) and vertical(s) asymptotes of $f(x) = \dfrac{1 - x^3}{|x|^3 - 1}$

5. Find the value(s) of A that makes $f(x) = \begin{cases} [x] + 3 & -2 \leq x < -1 \\ \dfrac{A}{2 + x} + x^2 & -1 \leq x < 2 \end{cases}$ continuous at $x = -1$