King Fahd University of Petroleum and Minerals
Department of Mathematics and Statistics
Math 101 (172) Sec 12 - Quiz 01

Name: ID: Serial No.:

1. $\lim_{x\to-\infty} \dfrac{x+5}{\sqrt{25x^2-3x}} =$

2. $\lim_{x\to 4^+} \dfrac{1-x}{4-x} =$

3. Given that $f(x) = 1 - 3x$. Find the largest δ such that if $|x-1| < \delta$, then $|f(x)+2| < 1.2$

4. Find the horizontail(s) and vertical(s) asymptotes of $f(x) = \dfrac{27 - x^3}{|x|^3 - 27}$

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