King Fahd University of Petroleum and Minerals
Department of Mathematics and Statistics
Math 101 Section 21 Quiz I (Term 161)

Name : ..... **ID** #..... Serial #: .....

1. Evaluate the limit if it exists. If it does not exist, explain why? Use the symbols ∞ or $-\infty$ as approximate.

(i) $\lim\limits_{x\to 2^+} f(x)$

(ii) $\lim\limits_{x\to 2^-} f(x)$

(iii) $\lim\limits_{x\to -3} f(x)$

(iv) $\lim\limits_{x\to 4} f(x)$

(v) $\lim\limits_{x\to 0} f(x)$

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2. Evaluate the limit or show that it does not exist:

(i) $\lim_{x \to 2^-} \dfrac{|x-2|(x-4)}{x-2}$

(ii) $\lim_{x \to 1} \left[\dfrac{1}{x}\right]$, where $[y]$ is the greatest integer less than or equal to y.

(iii) $\lim\limits_{x\to 3} \dfrac{x^2-9}{\sqrt{x^2+7}-4}$

(iv) $\lim\limits_{u\to -2} \dfrac{u^3+8}{u^2-4}$

(v) $\lim_{x \to 0} \left(x^2 \sin \frac{\pi}{x} \right)$