King Fahd University of Petroleum and Minerals
Department of Mathematics and Statistics
Math 101   Major Quiz 1

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

Question 1[4 points]: Find the following limits

1. $\lim_{x \to -1^+} [|1 - 3x|]$

2. $\lim_{x \to 2^-} \frac{2x - 4}{|x^2 + 7x - 18|}$

Question 2 [3 points]: If

$$x^3 - x + 4 \le x + 2g(x) \le 3x^3 + 1,$$

for all real numbers, then find $\lim_{x \to 1} g(x)$.

Question 3 [3 points]: Use $\epsilon - \delta$ to show that $\lim_{x \to 1}(5 - 2x) = 3$.