KFUPM | Term 101 | Date: 17/10/2010

Mathematics & Statistics | MATH 101 | Duration: 20 minutes

Quiz# 1

Name: ID #: Section 19 Serial #:

1. Show that the equation $e^{-x} = 2 - x$ has at least one real root.

2. Find a number $\delta > 0$ for $\varepsilon = 0.1$ such that $\lim_{x \to -1} \sqrt[3]{x} = -1$. Explain.

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Quiz# 1

Name: ID #: Section 33 Serial #:

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1. Compute the limit (if exists!) $\lim_{x\to 3.6}\left[\!\left[1-\frac{10}{3}x\right]\!\right]$. Explain.

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2. Compute the limit (if exists!) $\lim_{x\to -\frac{2}{3}^{+}} \frac{\left|3x^2-x-2\right|}{x+\frac{2}{3}}$. Explain.

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3. Compute the limit (if exists!) $\lim_{x\to 4} \frac{x^2-16}{2-\sqrt{x}}$. Explain

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Quiz# 1

Name: ID #: Section 36 Serial #:

1. Show that $\lim_{x \to c}(b - ax) = b - ac$ for any real number *a*, *b*, or *c*.

2. If $f(x) = \begin{cases} \dfrac{ax^2 - 5x - 3}{x - 3} & , \quad x \neq 3 \\ 7 & , \quad x = 3 \end{cases}$ is continuous, then find the value of *a*. Explain.

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