King **F**ahd **U**niversity for **P**etroleum and **M**inerals
Department of Mathematics & Statistics
Term 162 Quiz#1 (2.4 & 2.5) Math 101 (11)

Full Name: ID# **Ser#**

Q1. **Using** the $\varepsilon - \delta$ definition, prove the statement $\lim_{x \to -4} (1 - 3x) = 13$.

Q2. Find real α such that $f(x) = \begin{cases} \alpha^4 - 2x^2 & if\ x \leq 1 \\ x - 2\alpha^2 & if\ x > 1 \end{cases}$ is continuous.

Form A

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Q1. **Using** the $\varepsilon - \delta$ definition, prove the statement $\lim_{x \to -5} (1 - 3x) = 16$.

Q2. Find real α such that $f(x) = \begin{cases} \alpha^4 - 8x^2 & if\ x \leq 1/2 \\ 2x + 2\alpha^2 & if\ x > 1/2 \end{cases}$ is continuous.

Form B