

King Fahd University of Petroleum & Minerals
Department of Mathematics and Statistics

Math 101-27-Term141-Quiz.2

Name: _____ ID: _____ Serial#: _____

Solve all problems. Write clearly. Points will be deducted for messy work.

Q 1. Find $\lim_{x \rightarrow 2} \left(\frac{x - 2}{\sqrt{x^2 + 5} - 3} \right)$

Q 2. Suppose that $\lim_{x \rightarrow -1^-} f(x)$ exists and $\frac{x^2 + x - 2}{x + 3} \leq \frac{f(x)}{x^2} \leq \frac{x^2 + 2x - 1}{x + 3}$ holds for all x close to -1 . Find

$$\lim_{x \rightarrow -1^-} f(x).$$

Justify your answer.
