

King Fahd University of Petroleum & Minerals
Department of Mathematical Sciences
MATH - 101 Semester 083 **Quiz - 2**

Name: _____ ID# _____ Section# _____

Problem 1. Find the constant a such that the function

$$g(x) = \begin{cases} \frac{x^2 - a^2}{x - a}, & \text{if } x \neq a \\ 8, & \text{if } x = a \end{cases}$$

is continuous on the entire real line.

Problem 2. Find all the vertical and horizontal asymptotes of the function

$$f(x) = \frac{2x + 1}{\sqrt{x^2 - x}}$$