King Fahd University of Petroleum and Minerals
Math. & Stat. Department
163-Math 101 Quiz (1)

Name	ID	SEC 09

Q1) Find all vertical assymptotes of $f(x) = \dfrac{3x^2 - 4x - 4}{x^2 - 4}$.

Q2) If $\lim\limits_{x \to 2} \dfrac{f(x) - 4x}{\sqrt{x-2}} = 5$, then find $\lim\limits_{x \to 2} \dfrac{f(x) - 4}{\sqrt{x+2}}$.

Q3) To prove that $\lim_{x\to 3}\sqrt{7-x}=2$ by using the ε − δ definition of the limit, we find that for given $\varepsilon=1$, what is the largest possible value for δ ?

Q4) Evaluate $\lim_{x\to 0}(x^2-x)\cos\left(\frac{1}{x^2}\right)$.