King Fahd University of Petroleum & Minerals

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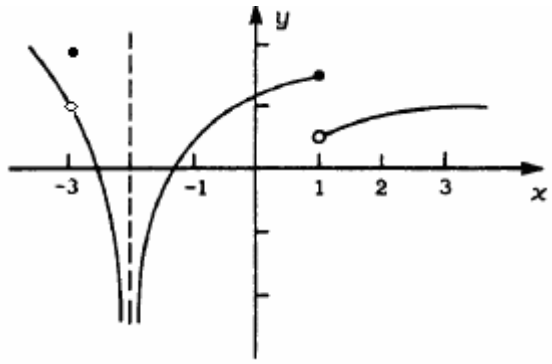
Name:

ID #: Quiz# 1 Serial #( )

1]Consider the graph of $y = f(x)$ given to the right

a) Find all values of c so that $\lim_{x \to c} f(x)$ does **NOT** exist.



b) $\lim_{x \to 1^+} f(x) =$

c) Find all values of c that are removable discontinuities.

2] Find a number δ such that $|f(x) - L| < \varepsilon$ if $0 < |x - a\pi| < \delta$, when

$\lim_{x \to 2}(3x - 1) = 5$; $\varepsilon = 0.01$

3] Find the following limits: (Show your work)

a) $\lim_{x\to 1} \dfrac{1-x}{2-\sqrt{x^2+3}}$

b) $\lim_{x\to -\infty} \dfrac{\sqrt{9x^4+x}}{x^2-8}$

c) $\lim_{x\to 0} \dfrac{x^2}{1-\cos x}$