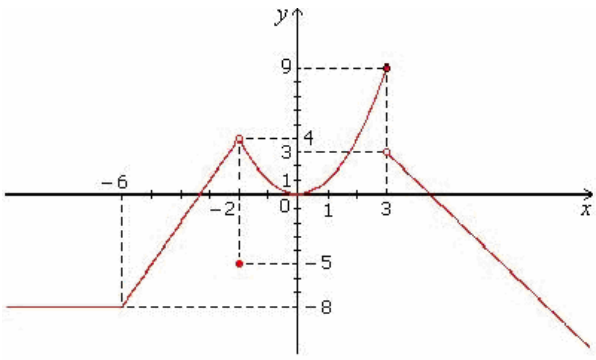
King Fahd University of Petroleum & Minerals
Department of Mathematics & Statistics
Math101-Term072-Quiz1

Name: ID: Sec.: Serial:

Q.1. Find a number δ such that $|f(x)-5|<0.1$ whenever $0<|x-1|<\delta$, where $f(x)=2x+3$

Q2. Let $f(x)=\begin{cases} a+bx, & \text{if } x>2 \\ 3, & \text{if } x=2 \\ b-ax^2, & \text{if } x<2 \end{cases}$ Determine the values of constants *a* and *b* so that $f(x)$ is continuous at $x=2$

Q.3 consider the following graph of the function $y=f(x)$.



Answer the following:

a. $\lim_{x\to -2^-} f(x)=$ **b.** $\lim_{x\to -2^+} f(x)=$

c. $\lim_{x\to 3^-} f(x)=$ **d.** $f(2)=$ **e.** $f(3)=$

f. The discontinuity points are:

g. Which one of the discontinuity points is **removable**? Why?