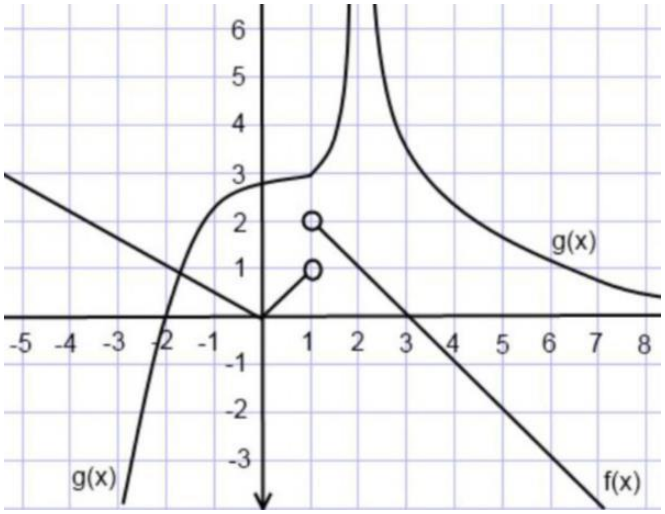
Math 101-172-Sec.05
Quiz #1

Name: **ID:** **SR:**

Question1: Use the graph to find the given limit if exists. Explain why?

a. $\lim_{x\to 0} f(x)$



b. $\lim_{x\to 1^-} (f(x) - g(x))$

c. $\lim_{x\to 1} [\![f(x)]\!]$, where$[\![x]\!]$, denotes the greatest integer function less than or equal x.

d. $\lim_{x\to 2} g(x)$

Question2: let Find $\lim_{x\to 1} f(x)$ if exists, where $\begin{cases} \frac{(5-x^2)-[\![2\,x+3]\!]}{1-x}, & 0 < x < 1 \\ 2x - |1-x^2|, & 1 \le x < 2 \end{cases}$

Question3: Sketch the graph of an example of a function $f(x)$ that satisfies the following conditions:

$\lim_{x\to 2^-} f(x) = 4$, $\lim_{x\to 2^+} f(x) = 2$, $\lim_{x\to -2} f(x) = 2$, $f(2) = 1$, $f(-2) = 3$.