Name: _____

Math 108
Spring 2024
Dr. Lily Yen

Quiz 2a
Show all your work

Number: _____

Signature: _____

Score: ___/8

Problem 1: Answer the following questions based on the following piece-wise defined function, f.

$$f(x) = \begin{cases} 3 - x^2, & x < -1 \\ \frac{1}{2}, & x = -1 \\ x + 1, & x > -1 \end{cases}$$

a. $\lim\limits_{x \to -1^-} f(x) =$

b. $\lim\limits_{x \to -1^+} f(x) =$

c. $f(-1) =$

d. Is f continuous at $x = -1$? Draw the function.

Score: /4

Problem 2: Use the definition of the derivative to find $g'(a)$ for $g(x) = \sqrt{x - 3}$.

Score: /4