Name _____

MATH-1951
Quiz 2 - (2.3 - 2.6)
Answer the following questions, and show your work. Scientific calculator only.

[1] (3 points total) Evaluate the limit, if it exists.

$$\lim_{x \to 36} \frac{\sqrt{x} - 6}{36 - x}$$

[2] (3 points total) Find the limit.

$$\lim_{x \to -\infty} \frac{-1 - 2x}{3x + 5}$$

[3] (4 points total) For what value of the constant c is the function continuous on $(-\infty, \infty)$? Make sure to show that the function is continuous for this value c.

$$f(x) = \begin{cases} 2(x - c) & \text{, if } x \geq 0 \\ x^2 + 1 & \text{, if } x < 0 \end{cases}$$