Quiz #4, 9/20
Math 156 (Calculus I), Fall 2022

Problem 1 is worth 10 points (2.5 pts each part), for a total of 10 points. Remember to *show your work* on all problems!

1. For each of the following limits: compute the limit, or if it does not exist explain why.

   (a) $\lim\limits_{x \to 3} \dfrac{x^2 + 6}{x}$

   (b) $\lim\limits_{x \to 1} \dfrac{x^2 + x - 2}{x - 1}$

   (c) $\lim\limits_{n \to \infty} \dfrac{5}{n} + 2$

   (d) $\lim\limits_{x \to 0} f(x)$, where $f(x) = \begin{cases} x + 1 & \text{if } x \geq 0 \\ x - 1 & \text{if } x < 0 \end{cases}$