1. (3 points) Determine the following limits. Explain your answers as much as possible.
   [Hint: For the limits in this problem, the only possible answers are $\infty$, $-\infty$, or DNE.]

   (a) $\lim_{x \to 3^-} \frac{x + 4}{x + 3}$

   (b) $\lim_{x \to 4} \frac{5 - x}{(x - 4)^2}$

   (c) $\lim_{x \to 5} \frac{1}{x - 5}$
2. (2 points) If \( f(x) = 2x - x^2 \), compute

\[
\lim_{h \to 0} \frac{f(5 + h) - f(5)}{h}
\]
3. (2 points) The graph of $y = f(x)$ is shown below.

Compute the following quantities. If a quantity does not exist, write DNE.

(a) $\lim_{x \to 4} f(x)$

(b) $\lim_{x \to 2^-} f(x)$

(c) $f(2)$

(d) $\lim_{x \to 2} f(x)$

(e) $f(4)$
4. (3 points) Determine the following limits.

(a) \( \lim_{x \to -1} \frac{x^2 + 2x + 1}{x^4 - 1} \) \[\text{Hint: } x^4 - 1 = (x^2 - 1)(x^2 + 1).\]

(b) \( \lim_{t \to 0} \frac{\sqrt{64 + t} - 8}{t} \)