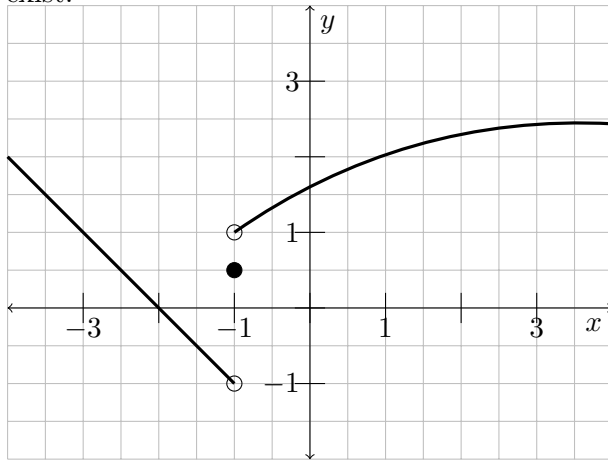1. The graph of a function f is shown below. Use the graph to find the following limits, if they exist.

a) $\lim_{x \to -3} f(x)$

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

c) $\lim_{x \to -1^-} f(x)$

d) $\lim_{x \to -1^+} f(x)$

2. Find the following limit, if it exists.

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

3. Find the following limit, if it exists.

$$\lim_{x \to 3} \frac{x^2 - 9}{x - 3}$$

4. Find those values of x for which the following function is continuous.

$$f(x) = \begin{cases} 2x - 1 & \text{if } x < 0 \\ x^2 + 2x - 1 & \text{if } 0 \le x \le 2 \\ 8 - x & \text{if } 2 < x \end{cases}$$