

1. Sketch the graph of a single function f that satisfies all of the following conditions:

- a) $f(-2) = 3$ and $\lim_{x \rightarrow -2} f(x) = 0$;
- b) $\lim_{x \rightarrow 0^-} f(x) > 0$ and $\lim_{x \rightarrow 0^+} f(x) < 0$;
- c) $\lim_{x \rightarrow 2^-} f(x) \leq 0$, $\lim_{x \rightarrow 2^+} f(x) \geq 0$, and $\lim_{x \rightarrow 2} f(x)$ exists;
- d) $\lim_{x \rightarrow 4^-} f(x) = 1$ and $\lim_{x \rightarrow 4^+} f(x)$ does not exist.

