

9. [8 points] On the axes provided below, sketch the graph of a single function f satisfying all of the following:

- $f''(x) > 0$ for $x < -2$.
- The graph of f has a vertical asymptote at $x = -2$.
- $f'(-1) = -3$
- $\lim_{x \rightarrow 0} f(x) = 2$
- $f(0) = -2$
- f is continuous but not differentiable at $x = 1$.
- $f'(x) > 0$ for $x > 3$.
- $\lim_{x \rightarrow \infty} f(x) = 4$

Remember to clearly label your graph.