8. [10 points] A function $h(x)$ satisfies all of the following:

- $h(x)$ is continuous on the interval $-5 < x < 5$.
- $h(x)$ is differentiable for all x in the interval $-5 < x < 5$ except at $x = 2$.
- $h(x)$ is decreasing for $-5 < x < -2$.
- $h(x)$ has a critical point at $x = -4$.
- $h(x)$ is concave up for $-3 < x < -1$.
- $h(x)$ has an inflection point at $x = 1$.
- $h(x)$ has a local minimum at $x = 3$.
- $h(x)$ is increasing at a constant rate for $4 < x < 5$.

On the axes provided below, sketch a possible graph of $h'(x)$ (the <u>derivative</u> of $h(x)$).
Make sure that your sketch is large and unambiguous.

Graph of $y = h'(x)$

Solution: Below is one possible graph.