6. [9 points] On the axes provided below, sketch the graph of a single function $y = R(x)$ satisfying all of the following conditions:

- The function $R(x)$ is defined on $-8 \leq x \leq 9$.
- $R'(x) = 2$ for $-8 < x < -5$.
- $R(x)$ is concave down and increasing on $-5 < x < -2$.
- $R(-2) = 1$.
- $R(x) = R(-x)$ for $-2 \leq x \leq 2$.
- The vertical intercept of $R(x)$ is $y = 3$.
- $\lim_{x \to 5^-} R(x) = -2$ but $\lim_{x \to 5} R(x)$ does not exist.
- $R(x)$ is not continuous at $x = 7$ but $\lim_{x \to 7} R(x)$ exists.

Make sure that your graph is large and unambiguous.

Solution: