

4. [15 points] On the axes below, part of the graph of a **continuous** function $f(x)$ is given. Suppose $f(x)$ has the following properties:

- $f(x)$ is **piecewise linear** on $[-3, 5]$.
- $\int_{-5}^{-3} f'(x) dx = \frac{3}{2}$.
- $\int_{-3}^0 f(x) dx = 3$.
- $\int_0^3 f'(x) dx = 2$.
- The average value of $f(x)$ on $[3, 5]$ is 1.

Sketch the rest of a possible graph of $f(x)$ on $[-5, 5]$, labeling all x and y intercepts. Label the x and y coordinates of the points on the graph at $x = 3, 5$, and also label the y coordinate of the point at $x = -5$. Be sure all other important features of your graph are clear.

