3. [6 points] On the axes below, sketch the graph of a **single** function $y = f(x)$ with all of the following properties:

- $f(x)$ has its vertical intercept at $y = 4$,
- the average rate of change of f between $x = -2$ and $x = 0$ is 0,
- $f(x)$ is concave down and increasing on the interval $-4 < x < -1$,
- $f(x)$ has a constant rate of change on $0 < x < 2$ with slope $-\frac{5}{2}$,
- the domain of $f(x)$ is $-5 < x \leq 5$,
- the range of $f(x)$ is $-4 \leq f(x) \leq 5$.

Solution: There are many possibilities for this graph! One is shown below. Some of the closed circles are to emphasize certain included points meeting the question requirements.