2. [8 points] On the axes provided below, sketch the graph of one possible function $y = f(x)$, satisfying all of the following requirements. Your graph should clearly show the properties listed below to receive full credit.

- The domain of $f$ is $(-5, 6]$.
- The range of $f$ is $[-6, 4]$.
- $f(x) < 0$ for $-5 < x < 2$.
- $f$ is decreasing on $(-5, 2)$.
- $f$ is concave up for $-5 < x < -2$.
- $f$ is concave down for $-2 < x < 1$.
- $f(3) = -1$.
- $f$ has a constant rate of change for $4 < x < 6$.

**Solution:**

![Graph of the function $y = f(x)$ showing the given properties.](image)