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: