

0. Print your name: _____

1. Sketch the graph of a function y where $y' < 0$ for $x < -2$ and $y' = 0$ at $x = -2$, $y' < 0$ for $-2 < x < 1$ and $y' = 0$ at $x = 1$ and $y' > 0$ for $1 < x$.

2. Sketch the graph of a function $f(x)$ that has exactly three critical values: a local max at $(-3, 12)$, a local min at $(0, 2)$ and another local min at $(4, 6)$.

3. Find the critical points of $y = x^3 - 27x$. Classify them using either the 1st derivative or the 2nd derivative test.