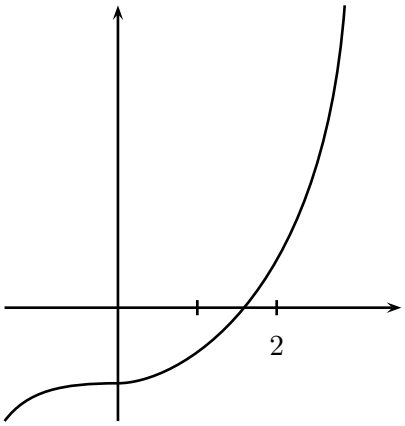
8. Let $f(x) = x^3 - a$, for $a > 1$ a constant. The graph of $f$ is shown below.

(a) (2 points) Label the numbers $-a$ and $\sqrt[3]{a}$ on the axes below.




(b) (4 points) Find the equation for $L(x)$, the linear approximation to $f$ near $x = 2$. Your equation will contain the constant $a$. Sketch the graph of $L(x)$ on the axes above.

(c) (4 points) Use the function $L$ to approximate $2.01^3$.