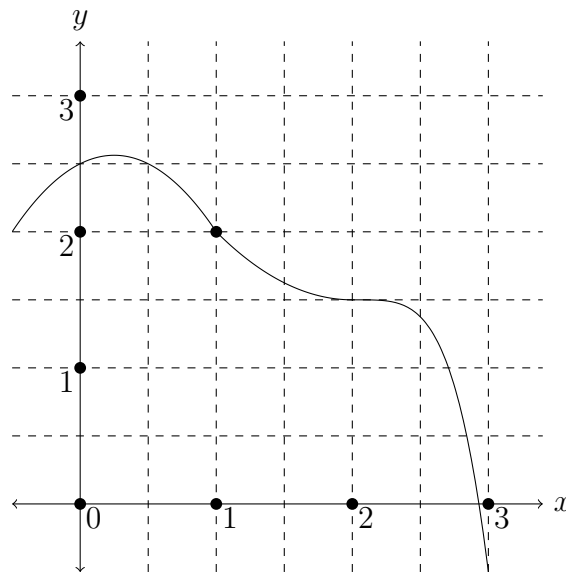

The Precise Definition of a Limit

Solutions should show all of your work, not just a single final answer.

1. For the continuous function $f(x)$ whose graph is below, $f(1) = 2$. Estimate a value of $\delta > 0$ such that if $0 < |x - 1| < \delta$, then $|f(x) - 2| < 1$. Explain your answer by referencing the graph.



2. Let $g(x) = 4x - 1$. Prove that $\lim_{x \rightarrow 2} g(x) = 7$ by using the ε, δ definition of a limit.