Example-Negation

Problem. Negate the following:

For all $\epsilon > 0$ there exists $\delta > 0$ such that whenever $x \in D$ and $0 < |x - a| < \delta$, then $|f(x) - A| < \epsilon$.

Solution: There exists $\epsilon > 0$ such that for all $\delta > 0$ there exists $x \in D$ with $0 < |x - a| < \delta$ and $|f(x) - A| \geq \epsilon$.