# HW 3-1-23

(1) Let $f \geq 0$ be measurable, and $N = \{x \in \Omega : f(x) > 0\}$.

Prove that $\int f \leq (\sup f)\, \mu(N)$. (Again, the convention is that if $\mu(N) = 0 \Rightarrow$ RHS $= 0$.)

(2) If $g \in L$, $g \geq 0$, and $\int g = 0$, prove $g = 0$ a.e.