Water drains from the tank with area $A$ shown below through a long tube of length $L$ and diameter $d$. Ignoring the fluid inerterance of the tube and assuming laminar flow, estimate how long it will take for the tank to drain to $H=0$ from an initial height $H_0$. The density of the water is $\rho$ and the viscosity of the water is $\mu$. The pressure at the bottom of the tank is $\rho g H$ and the pressure surrounding the tank and tube is zero.

\[ \Delta h + H = 0 \]

\[ H(0) = H_0 \]

\[ T = \frac{1}{\rho g A L} \]

Time $T \approx 5 \text{s}$