Basic Laws for Finite Systems - 4
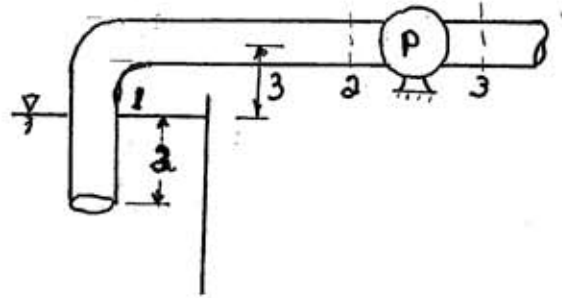
3.8 Water is pumped from the reservoir at the rate of $\dot{q} = 0.025 m^3 / s$ through a 7.5 cm diameter pipe. If the pump delivers 1500 watts, what is the pressure at point 3?

3.9 Water flows from a tank at the rate of $\dot{q} = 0.08 m^3 / s$ to drive a turbine. What is the work rate of the turbine?