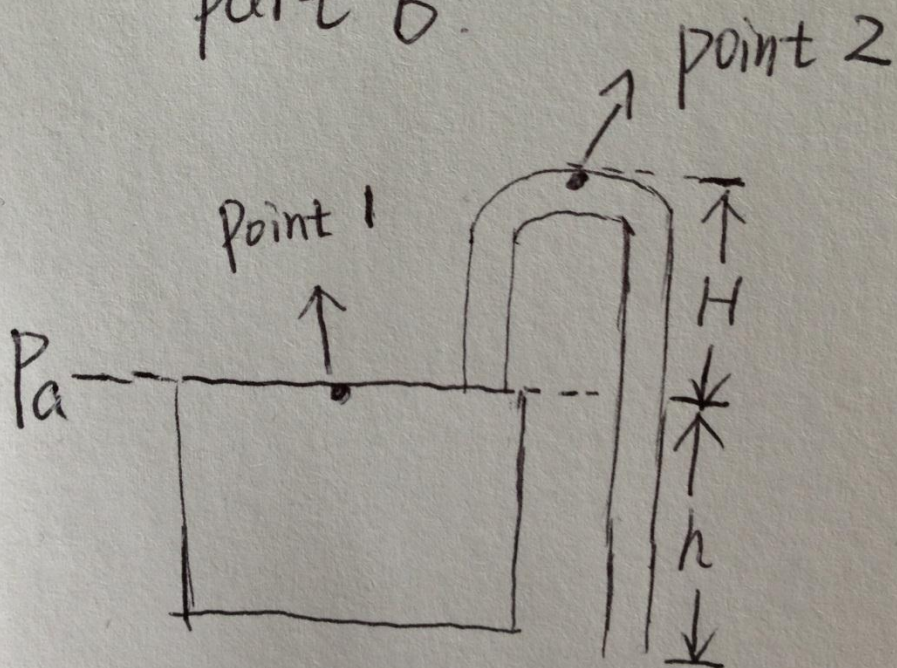


12.98.

part B.



Apply Bernoulli's equation to points 1 and 2:

(The pressure at point 1 is P_a .)

$$P_a + \frac{1}{2}\rho v_1^2 + \rho g \cdot (0) = P_2 + \frac{1}{2}\rho v_2^2 + \rho \cdot g \cdot H$$

The upper surface of the liquid in the container will drop very slowly and we can regard v_1 as essentially equal to zero.

When the flow is still at point 2, $v_2 = 0$.

We can get:

$$P_a = P_2 + \rho g H$$

$$\text{Setting } P_2 = 0, \quad H = \frac{P_a}{\rho g}$$