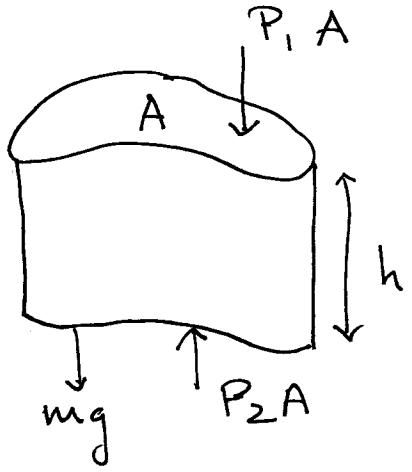
Lecture 25

① density $\rho = \frac{m}{V}$

② Pressure and depth



$V = Ah$

$m = \rho V = \rho Ah$

$\sum F_y = P_2 A - P_1 A - mg = 0$

$\Rightarrow P_2 A - P_1 A - \rho Ahg = 0$

$\Rightarrow P_2 = P_1 + \rho gh$

if $P_1 = P_0$ or P_{atm} (atmospheric pressure)

then $P = P_0 + \rho gh$

Demo: Water cylinder with holes at different heights.