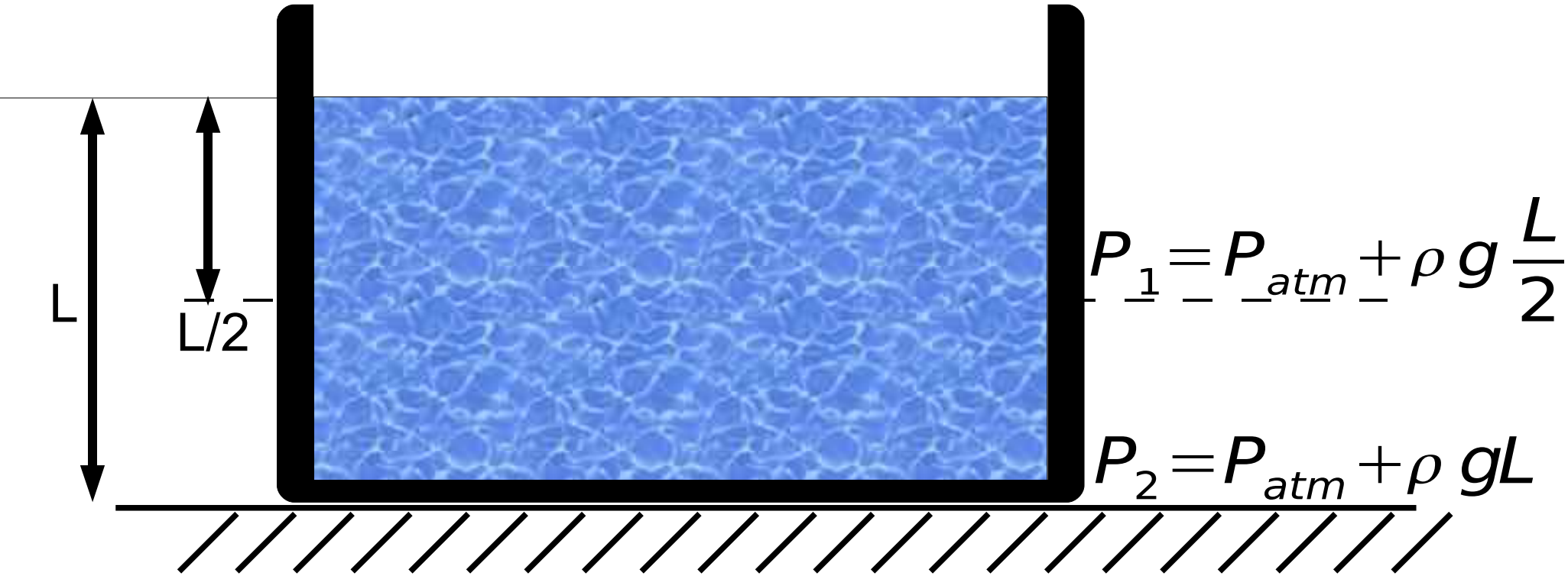
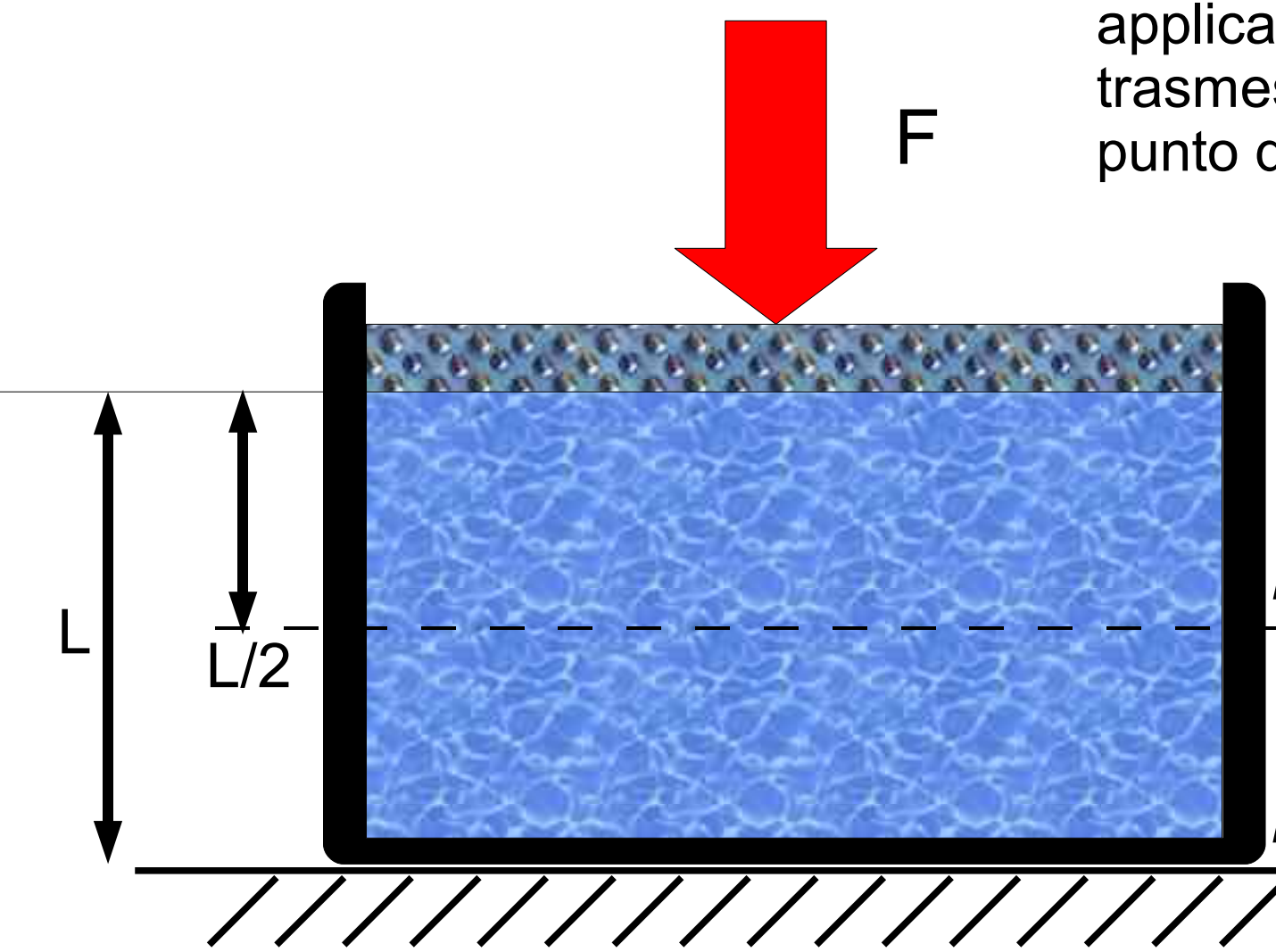
Principio di Pascal



Principio di Pascal

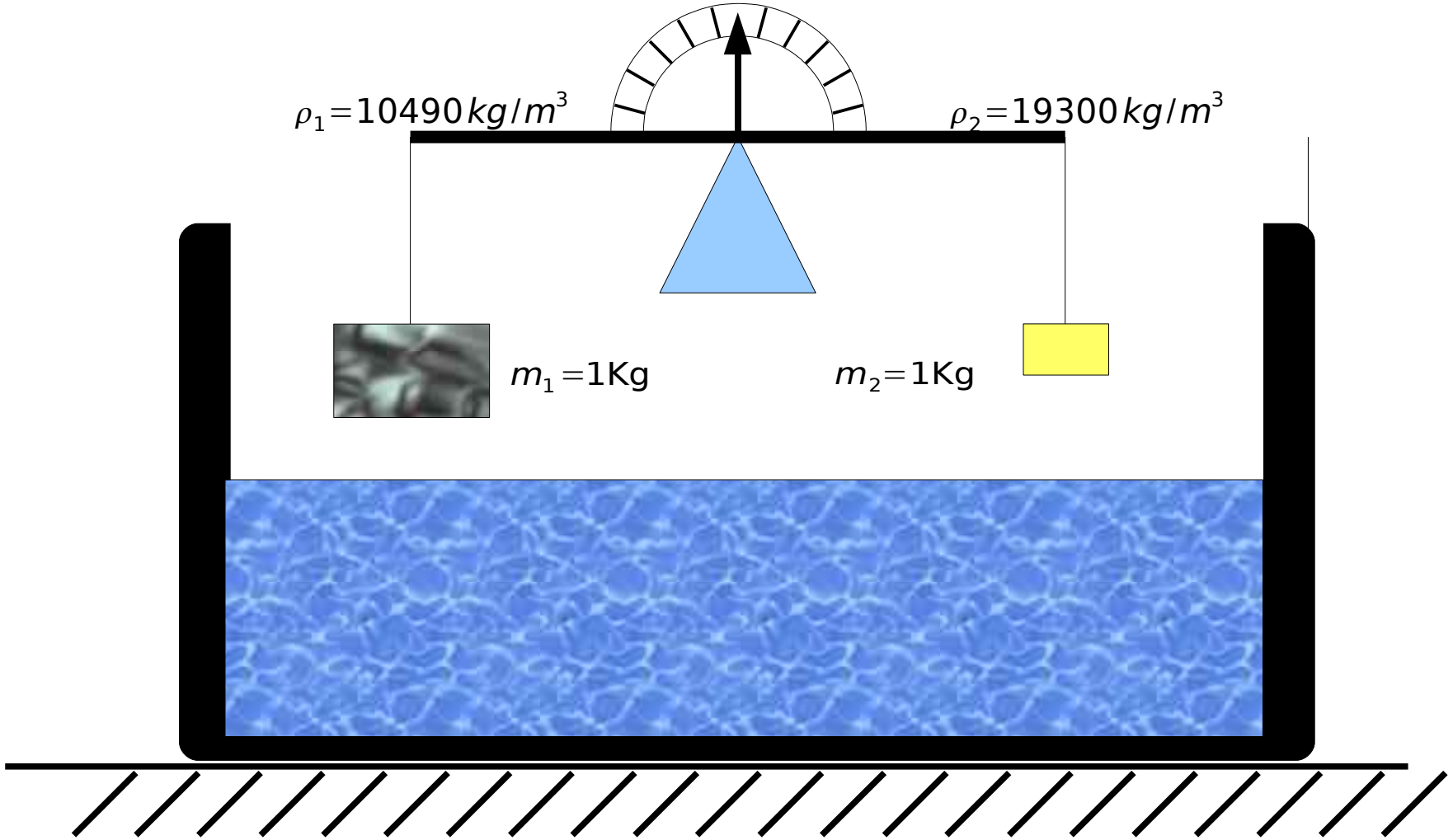
Una pressione esterna applicata al fluido viene trasmessa inalterata in ogni punto del Fluido



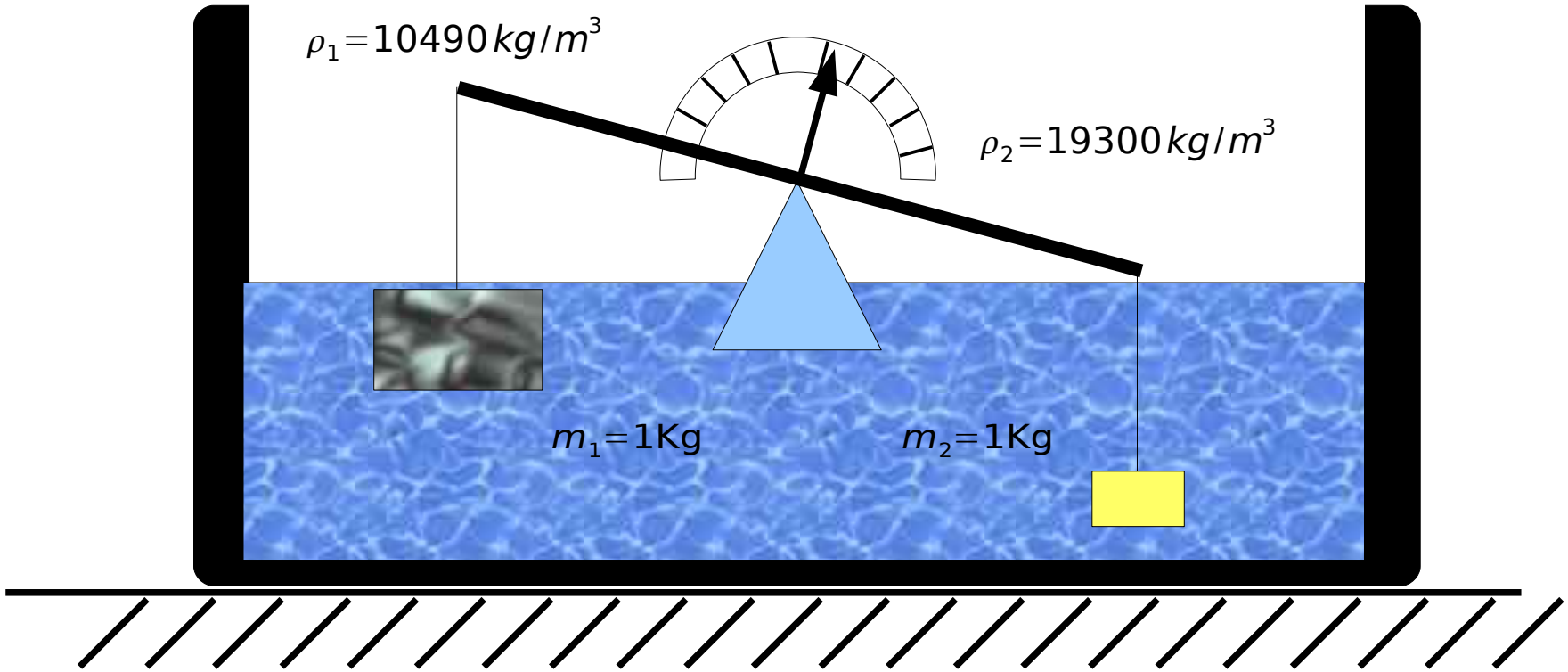
$$P_1 = P_{atm} + \rho g \frac{L}{2} + P_F$$

$$P_2 = P_{atm} + \rho g L + P_F$$

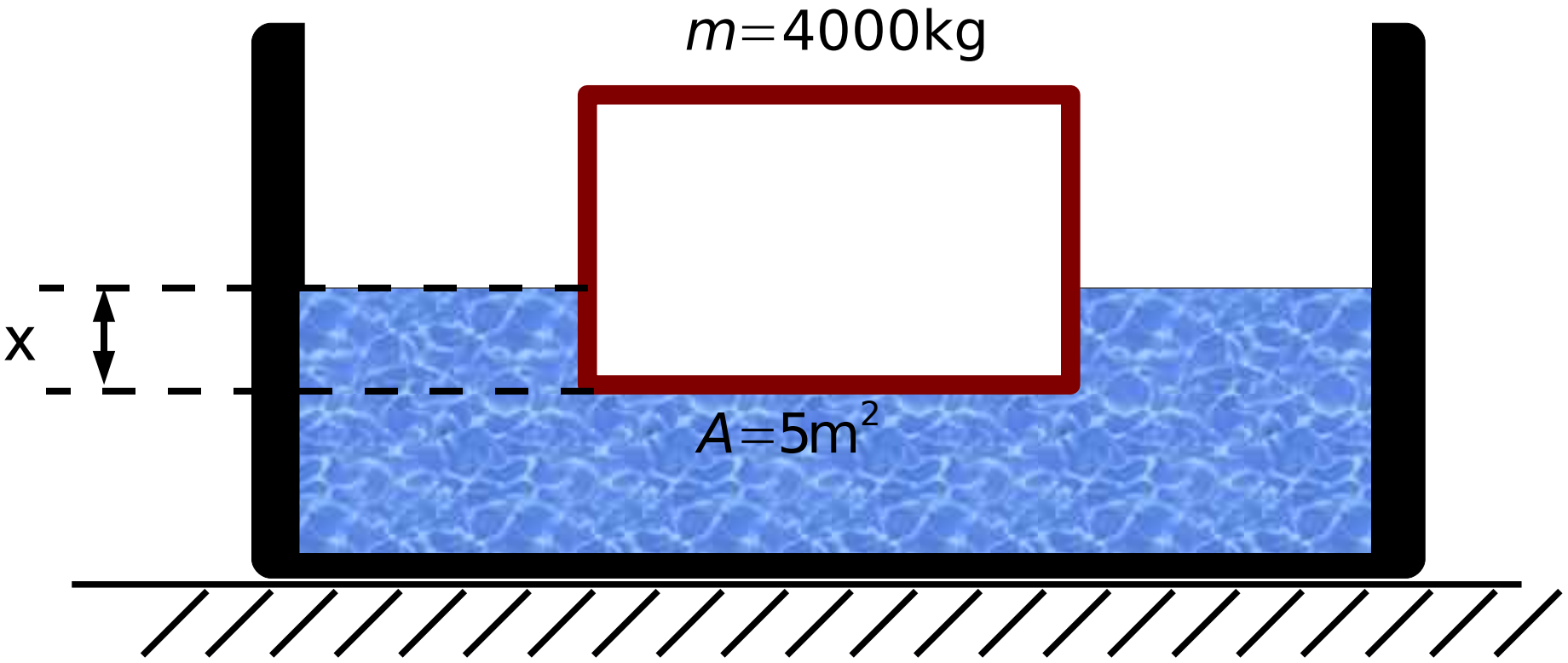
Applicazione del principio di Archimede



Applicazione del principio di Archimede



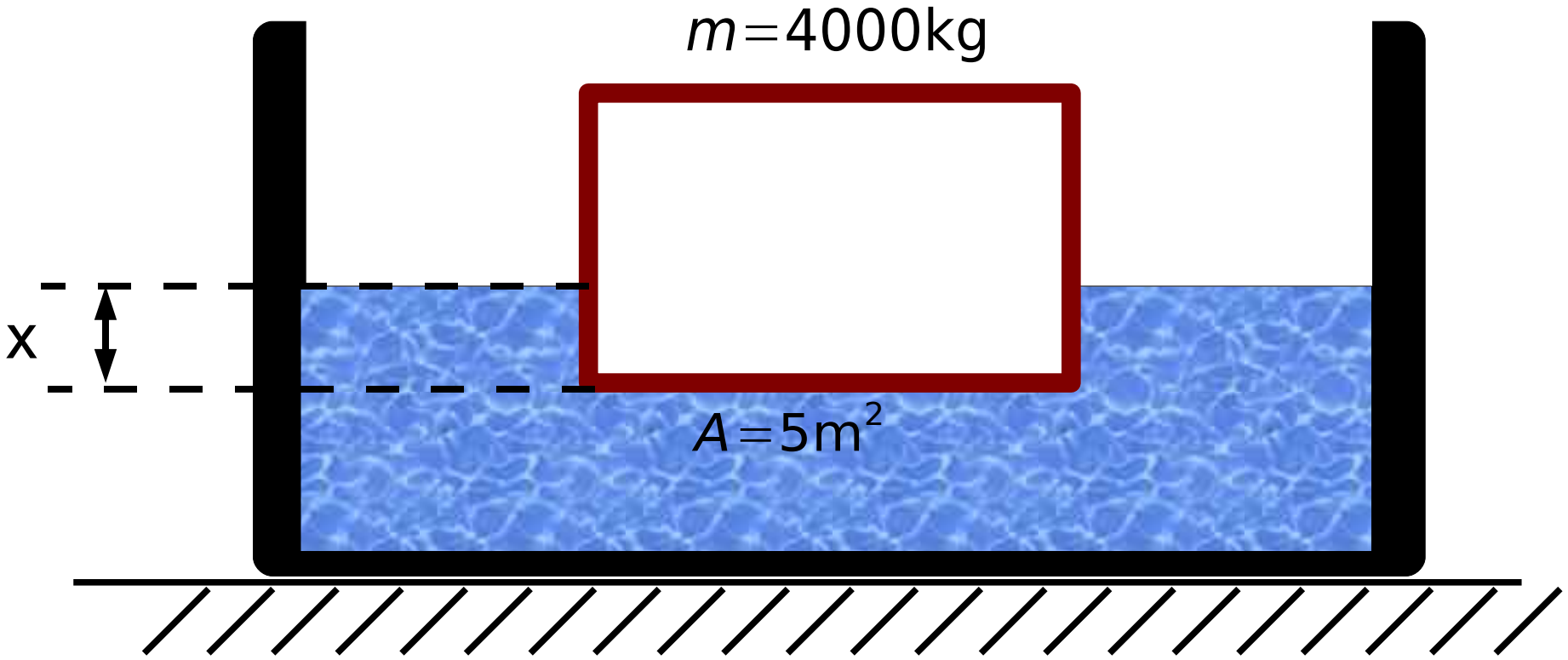
Applicazione del principio di Archimede: il galleggiamento



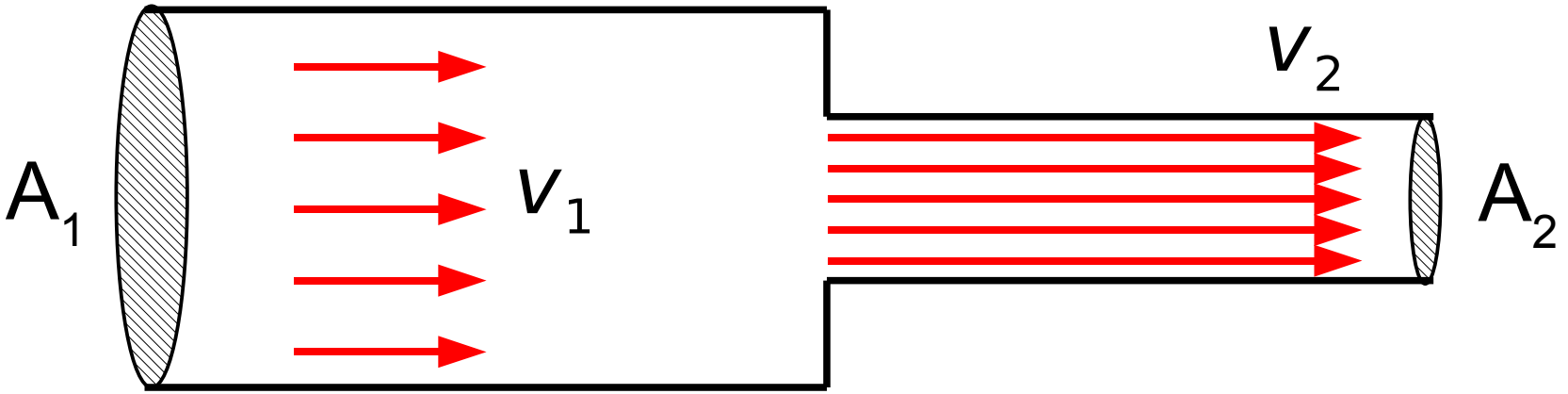
Applicazione del principio di Archimede: il galleggiamento

$$V = xA$$

$$mg = \rho Vg \rightarrow x = \frac{m}{\rho A} = \frac{4000}{1000 \cdot 5} = 0.8\text{m}$$



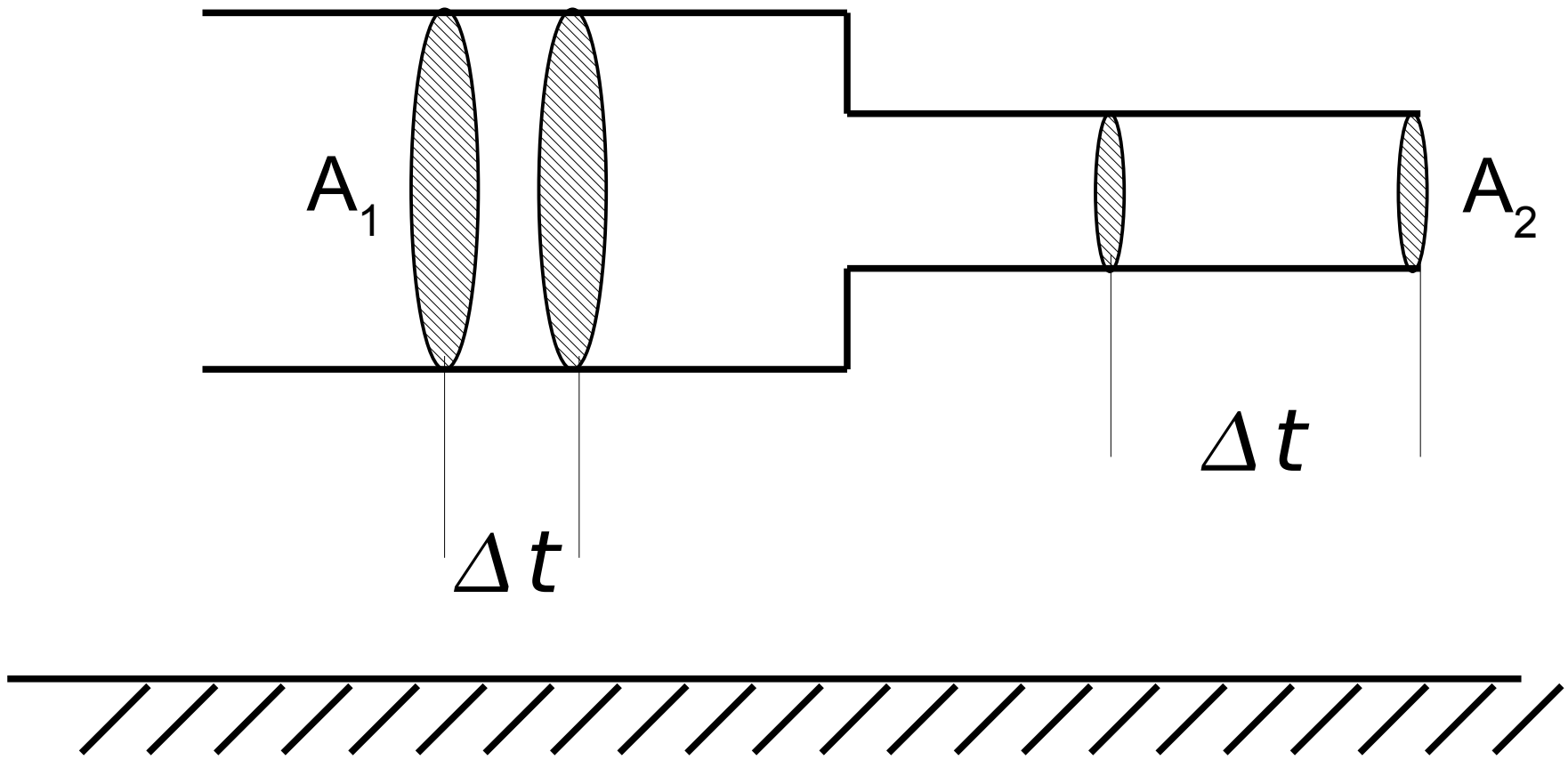
Flusso di un fluido



Flusso di un fluido

$$\Delta V_1 = A_1 v_1 \Delta t$$

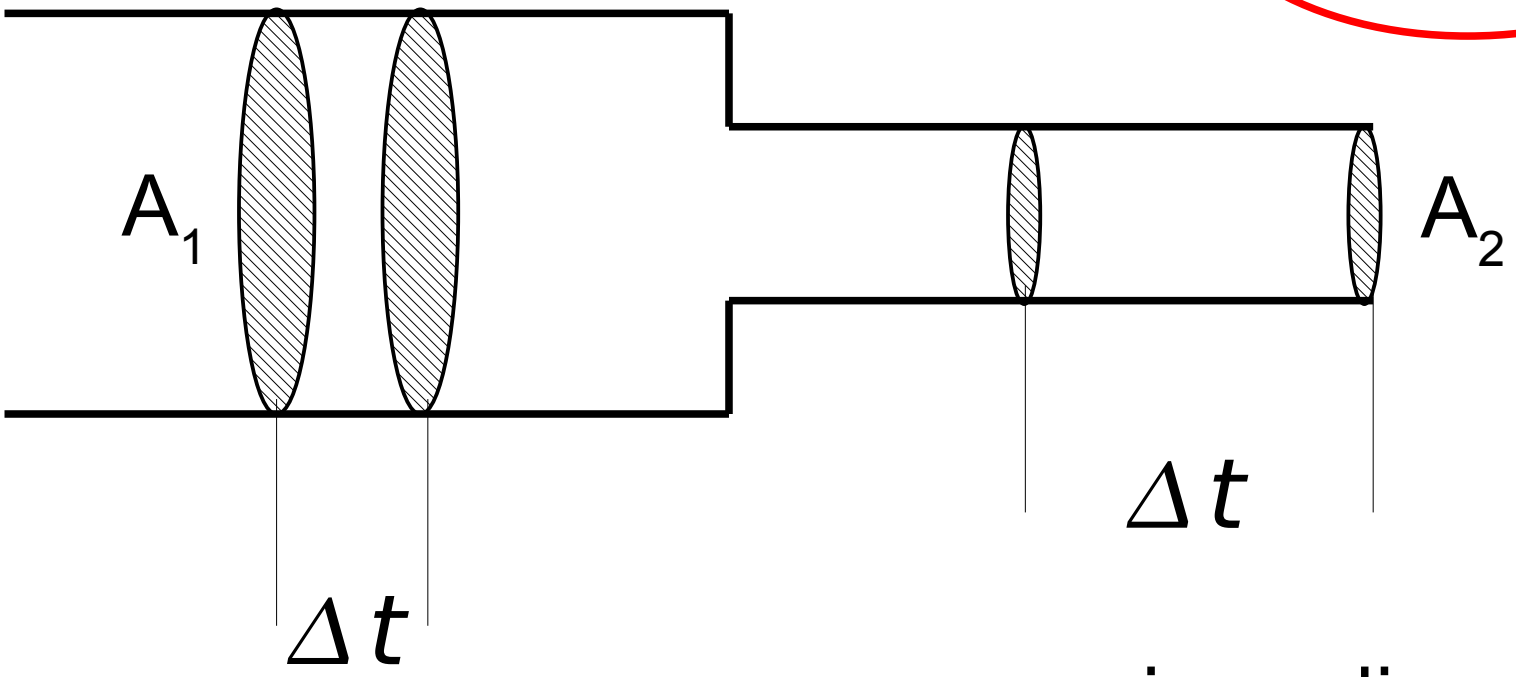
$$\Delta m_1 = \rho \Delta V_1 = \rho A_1 v_1 \Delta t$$



Flusso di un fluido

$$\Delta m_1 = \rho \Delta V_1 = \rho A_1 v_1 \Delta t$$

$$\Delta m_1 = \Delta m_2 \rightarrow \rho A_1 v_1 \Delta t = \rho A_2 v_2 \Delta t \rightarrow A_1 v_1 = A_2 v_2$$



equazione di continuità

Equazione di Bernouilli

$$P_1 + \frac{1}{2}\rho v_1^2 = P_2 + \frac{1}{2}\rho v_2^2$$