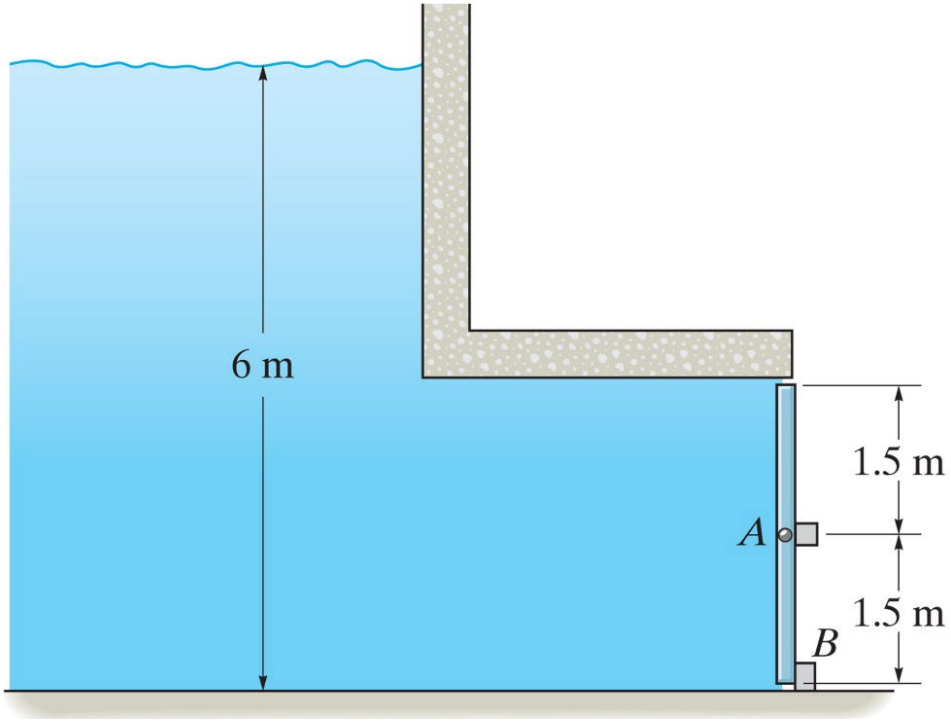
Announcements

- Quiz 5 next week (be sure to register for TAM 211 separately)

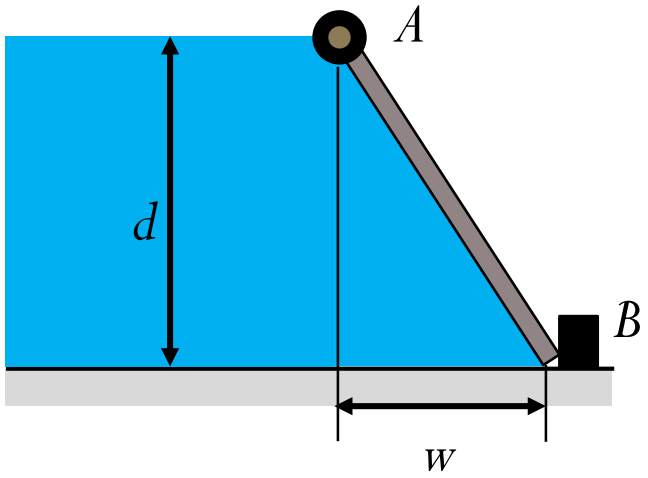
- Upcoming deadlines:
- Friday (4/12 – TODAY!): Written Assignment
- Tuesday (4/16): PL HW12

Objectives

- Hydrostatic pressure
- Buoyancy



The 2-m-wide rectangular gate is pinned at its center A and is prevented from rotating by the block at B. Determine the reactions at these supports due to hydrostatic pressure.



Determine the magnitude of the support reaction at the gate stopper B. The water level is $d = 4$ m, $w = 3$ m, and gate AB has a width of 2 m.
($\rho_{water} = 1$ Mg/m3)

Buoyancy

Archimede's Principle: Any object, totally or partially immersed in a fluid, is buoyed up by a force equal to the weight of the fluid displaced by the object.

When a rectangular block of wood of cross sectional area A, height h, and mass m is placed in a lake. How far below the surface z is the bottom of the block? ($\rho_{water} = 1\ Mg/m^3$)