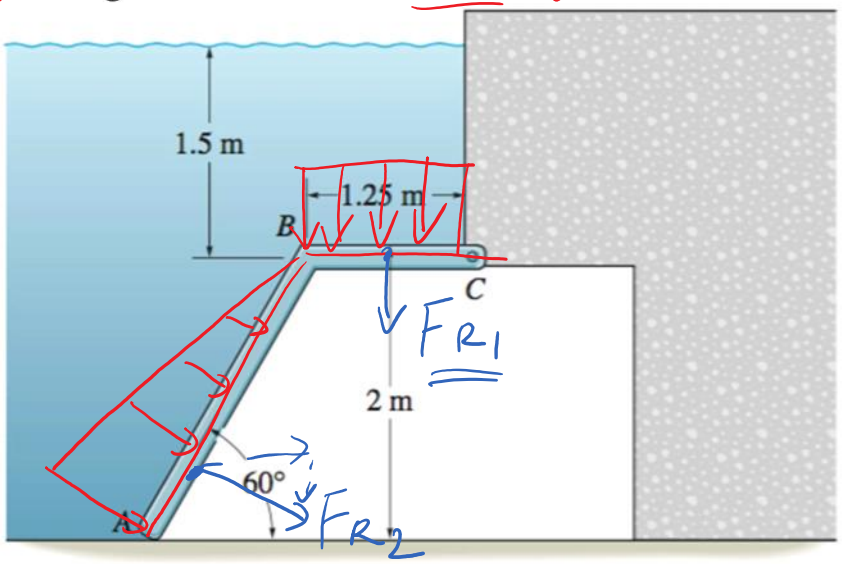
Lec30-1

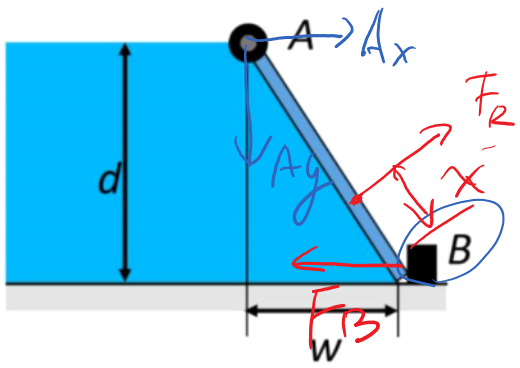
Monday, November 30, 2020 7:52 AM

Determine the magnitude of the resultant force acting on gate ABC due to hydrostatic pressure. The gate has a width of 1.5 m. ($\rho_{water} = 1\ \text{Mg/m}^3$)



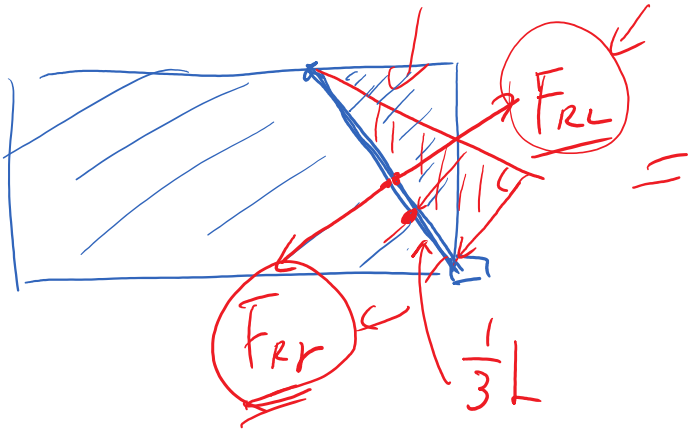
$F_{Rx} =$

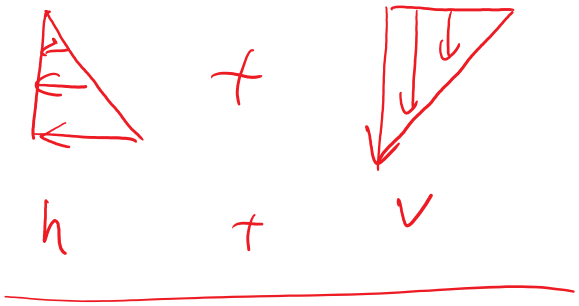
$F_{Ry} =$

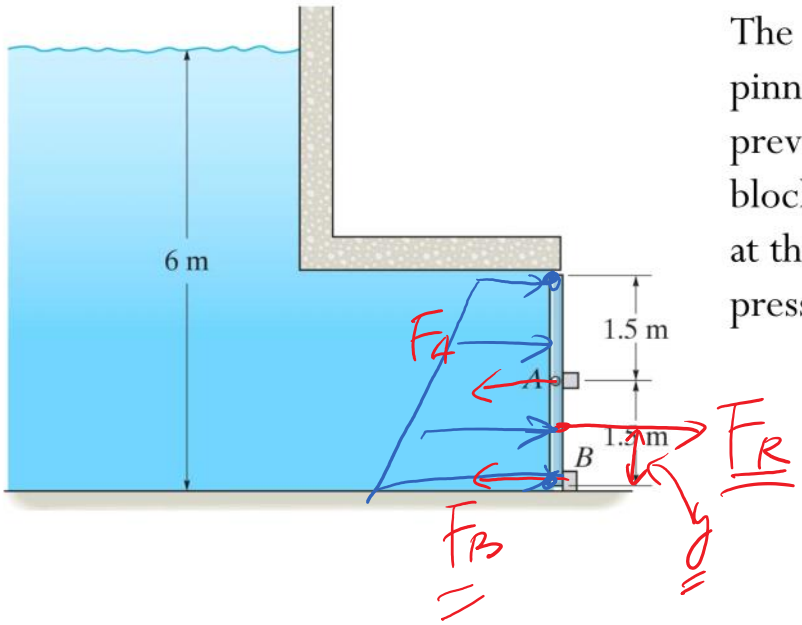


Determine the magnitude of the support reaction at the gate stopper *B*. The water level is $d = 4$ m, $w = 3$ m, and gate *AB* has a width of 2 m. ($\rho_{water} = 1$ Mg/m^3)

$x = \frac{1}{3}AB$







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.