

Problem 104A

The L-shaped gate shown in the figure can rotate about the hinge. As the water level rises the gate will automatically open when the water level rises to a certain height, h . If the length of the lower arm of the gate is 1 m find the critical height, h . (Assume that when the gate is closed, as shown in the figure, there is a seal at the point S. Neglect the weight of the gate.)

