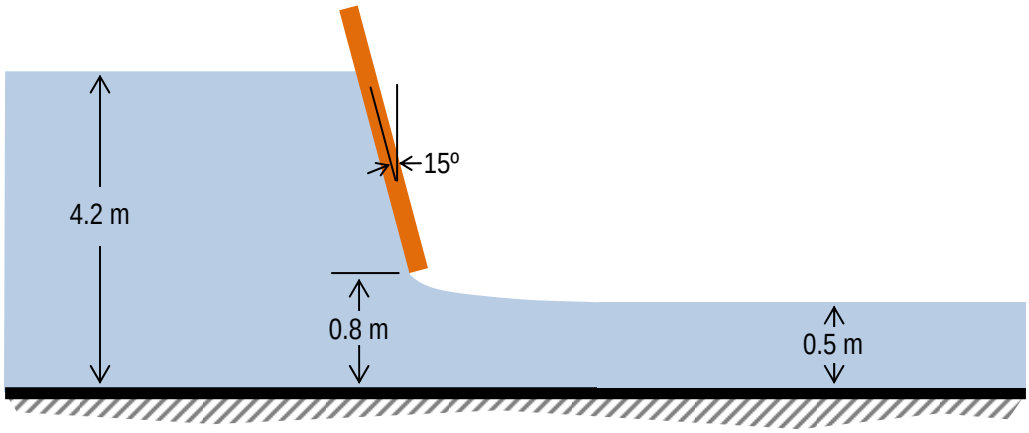
Name: _____

CVEN 311-501 – "Fluid Dynamics"
Quiz #4 – Fall 2010
Prof. Brumbelow
October 29, 2010

1. Sketched below is a sluice gate through which water flows. Determine the volumetric flowrate (m^3/s) under the gate if the gate is 5 m wide.



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2. Assuming non-viscous flow, draw the EGL and HGL for the system below, and determine the minimum pressure (psi) in the pipe. At point X the flow velocity is 8.02 ft/sec, and the pipe diameter is 12 inches. The pipe diameter decreases to 6 inches in the middle of the figure and increases to 12 inches at the right side of the figure. The vertical scale indicated by the grid is 1 ft per grid square.