

Name: _____

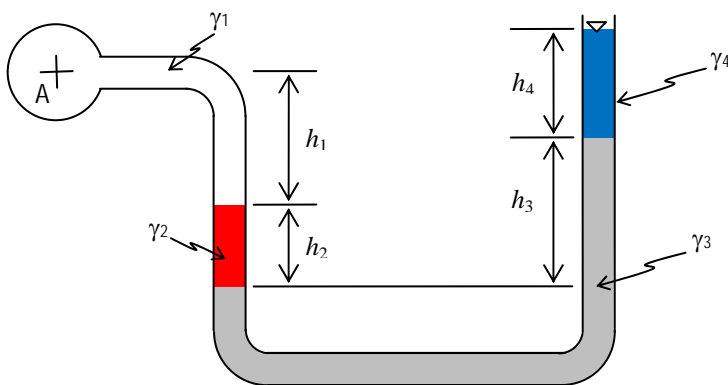
CVEN 311-503 – “Fluid Dynamics”

Quiz #2 – Fall 2011

Prof. Brumbelow

September 23, 2011

1. A water tower is 100 ft high. What is the pressure (psi) at the bottom of the tower? _____ psi
2. How tall would a water tower need to be so that the pressure at the bottom is 100 psi? _____ ft
3. A four-fluid U-tube manometer is diagrammed below. Write an equation that can be used to calculate the pressure at point A p_A :



4. If the tank diagrammed below is filled with mercury ($\rho = 13534 \text{ kg/m}^3$), what is the resultant pressure force (N) on the plane drawn in red (assume that the dimension of the red plane in/out of the page is 1 m)?

