

Review Class Problems  
Friday, 29<sup>th</sup> Sep 2017

1. A wooden raft with dimensions of 5 x 4 m and thickness 30 cm is floating on water. How much of the raft is under water? (Density of wood = 500 kg/m<sup>3</sup>; Density of water = 1 gm/cc)
2. Show through calculations why a water barometer is not used in practical situations?
3. Explain how a hydrometer can be used by a food engineer to detect problems in a brewing/wine making industry?
4. Solve Problem 2B.4 from the textbook BSL. (Problem asks about laminar slit flow with a moving wall also known as “plane Couette Flow”).