PreLab 12: Archimedes’ Principle

Instructions: Prepare for this lab activity by answering the questions below. Note that this is a PreLab. It must be turned in at the start of the lab period. Time cannot be given in lab to perform PreLab activities. After the start of lab activities, PreLabs cannot be accepted. Explain your answers. Points will be taken off if your work is not neat and well organized.

1. (7 points) What is Archimedes’s Principle? Explain how Archimedes’ principle is used to find the density of a solid.

2. (8 points) Consider the figure to the right.
   a) Calculate the buoyant force.

   b) What is the specific gravity of the object if the fluid is water?

   \[ F_1 = 17.7 \text{N} \quad F_2 = 18.4 \text{N} \]