

Physics 215 – Pre-Lab

Archimedes' Principle

1. What is Archimedes' principle? (2 pts.)
2. Explain the relationship $F_B = \rho Vg$. (2 pts.)
3. Briefly explain two methods to be used in the lab to determine buoyant forces (i.e., the direct method and the displacement method). (3 pts.)
4. Draw a free-body diagram for an object of mass M , for the following two situations:
(a) a submerged object suspended by a string; (b) a floating object. Draw to scale. (3 pts.)