

Archimedes' Principle Worksheet

Submerged Objects

1. Weight of clay in air _____ g
2. Weight of clay submerged in water _____ g
3. Difference in weight (1 – 2) _____ g
4. Volume of clay by water displacement _____ mL

(Starting volume ____ mL Ending volume ____ mL)

5. Assume the density of water is 1 g/mL. Explain the similarity between #3 and #4 above. (If your numbers are not similar, repeat steps 2–10 again.) The similarity of #3 and #4 represents Archimedes' Principle. Write the principle in your own words.

Floating Objects

6. Water displaced by submerged clay _____ mL
7. Water displaced by floating clay boat _____ mL
8. Calculate the density of clay: _____ g/mL

Should the clay sink or float? Explain.

9. Calculate the density of the clay boat: _____ g/mL

Should the boat sink or float? Explain.

10. What amount of water should equal the volume of that displaced by the floating clay boat? (*Hint*: What does the water line on a floating object indicate?)