

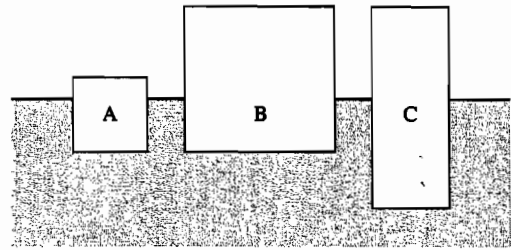
15.4 Buoyancy

14. Rank in order, from largest to smallest, the densities of A, B, and C.

Order: $A > C > B$ ✓

Explanation:

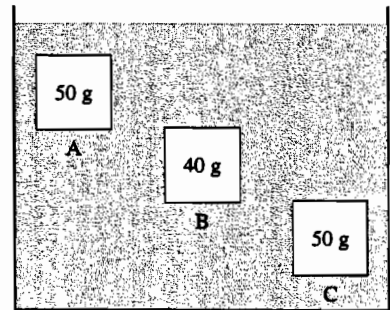
Because the ratio of mass displaced by the water compared to the mass out of the water determine the density.



15. A, B, and C have the same volume. Rank in order, from largest to smallest, the sizes of the buoyant forces F_A , F_B , and F_C on A, B, and C.

Order: $A = B = C$ ✓

Explanation: B/c buoyancy depends on water displaced and they all have the same volume, then they all displace the same amount of water.



16. Refer to the figure of Exercise 15. Now A, B, and C have the same density. Rank in order, from largest to smallest, the sizes of the buoyant forces on A, B, and C.

Order: $A = C > B$ ✓

Explanation:

$\rho = \frac{m}{V}$ and since the masses of A & C are equal they have equal volumes larger the B's (which are the same dens) $\rho = \frac{m}{V}$ then the volume is