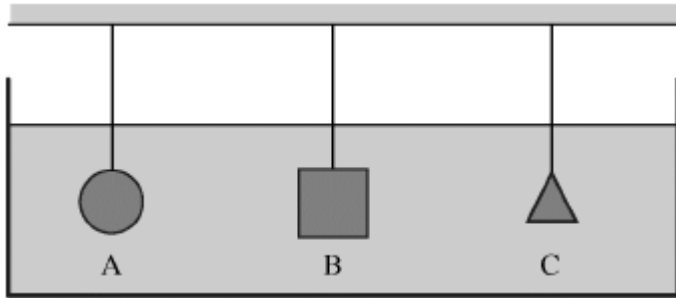


Name: _____ Date: _____

Static Fluids Review



Three objects of identical mass attached to strings are suspended in a large tank of liquid, as shown above.

(a) Must all three strings have the same tension?

___ Yes ___ No

Justify your answer.

Object A has a volume of $1.0 \times 10^{-5} \text{ m}^3$ and a density of 1300 kg m^3 . The tension in the string to which object A is attached is 0.0098 N .

(b) Calculate the buoyant force on object A.

(c) Calculate the density of the liquid.

(d) Some of the liquid is now drained from the tank until only half of the volume of object A is submerged.

Would the tension in the string to which object A is attached increase, decrease, or remain the same?

___ Increase ___ Decrease ___ Remain the same

Justify your answer.