

Name: \_\_\_\_\_

1

SPH460

Pascal's Law & Archimedes' Principle - QUIZ

1. Archimede's Principle states that \_\_\_\_\_
2. Pascal's Law states that \_\_\_\_\_
3. If an object floats in water it means that its buoyant force is equal to its  
\_\_\_\_\_
4. The pressure in a liquid increases if \_\_\_\_\_  
and if \_\_\_\_\_
5. The pressure in a liquid does not change when \_\_\_\_\_
6. How many kilograms can be lifted with an hydraulic lift if the large cylinder has an area ten times larger than the small cylinder, and a force of 10 N is applied to the small cylinder.  
Show your work here

7. You measure the force of gravity of a block of wood in air and find it to be 1.5 N. When you place the block in water 140 mL of water are displaced and the spring scale reads 1.4 N.

- a. What is the buoyant force on the block of wood?
  - b. What do the results of the experiment tell you about the block of wood?
- Show your work here