**Round:  3B**

You are sitting in a canoe that also contains a large rock. The canoe is floating in a swimming pool filled with fresh water with a density of 1 g/cm$^3$.  The rock has a volume of about 10,000 cm$^3$ and a density of 2.65 g/cm$^3$.  You decided to toss the rock into the pool and do so without taking on water.

1. Is the water level in the pool higher, lower or unchanged after the rock is thrown in the water compared to when both you and the rock were in the canoe?  (4 pts)

2. Explain the mechanism(s) involved. (4 pts)

3. What volume of water does the rock displace when in the canoe? (5 pts)

4. What volume of water does the rock displace in the pool?  (5 pts)

5. Name the Greek scientist attributed with first explaining this phenomenon? (2 pts)