Name: _____Date: _____ Period: _____

Favorite Beatle:_____ **Liquidation**

1) Originally, you were told that $P = \frac{F}{A}$, but the density equation for liquid is P = (weight density)(depth). Derive the second equation from the first one (meaning, use math you silly goose!).

2) What has more water pressure, the bottom of bathtub of water 30 cm deep or the bottom of a pitcher of water that is 35 cm deep? Explain.

3) Calculate the water pressure at the minimum depth of an Olympic swimming pool (such as one the one used in the last Olympics. Yup, you should look it up on the internets).

4) Typically, 90% of an iceberg is submerged in water. One of the largest icebergs in Antarctica, was about 4,500 mi^2 and about ½ a mile thick (probably not anymore, stupid global warming).
   a. How much seawater does it displace?

   b. What is the weight of the iceberg?

   c. What is the weight of the displaced seawater?

5) A 0.15 g lead weight, attached to a string, is lowered halfway into a 100 mL container full of water. As a result of this, water spills over onto the floor (achtung!).
    a. How much water is spilled?

    b. What is the buoyant force on the lead weight?

    c. How much does the lead weight weigh when immersed in the water?

6) Oak is 0.8 dense as water and therefore floats in water.
    a. What weight of water will be displaced by a 50 kg floating oak beam?

    b. What additional force would be required to poke the oak beneath the surface so it is completely submerged?

7) Gibt es in Ihrem Gehirn zu verletzen?