PHYS 101 In-Class Problem Solving Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Define pressure.

2. Define density.

3. Define weight.

4. A swimming pool of width 9.0 m and length 24.0 m is filled with water to a depth of 3.0 m.   
(Density of water = 1000 kg/m3)  
a. What is the volume of water?

b. What is the mass of water?

c. What is the weight of water?

d. Calculate pressure on the bottom of the pool due to the water.

e. What is the total force on the bottom of the pool due to the water?