**Chemistry Sept 2019 WS2 Uncertainties Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Due: next class /14**

1. Add the following measurements. (2)
   1. (12.5 + 0.3) mL + (71.8 + 0.5) mL = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   2. (28.7 + 0.8) mL + (18.8 + 0.8) mL = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Subtract the following measurements. (2)
   1. (48.5 + 0.7) mL - (28.8 + 0.5) mL = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   2. (942.55 + 0.05) mL - (208.57 + 0.08) mL = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Show your work for questions 3, 4 & 5 by giving the formula used. Include units and absolute uncertainty.**

1. Multiply (8.51 + 0.05) mL x (38.82 + 0.04) mL (3)

Final answer \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Divide (105.00 + 0.04)g ÷ (25.0 + 0.3) mL (3)

Final answer \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. An irregular object that weighs (23.68±0.05)g is placed into a graduated cylinder that contains (50.0±0.5)mL of water. The water level rises to (73.6±0.5)mL. Find the density of the object. Include units and the absolute uncertainty of the final answer. Show all your work. (4)

Final answer \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_