Name: _____

The Determination of a Chemical formula

Data Table

a. Dehydration via Oven	*grams*	*grams*	*b. Dehydration via Direct Heat*	*Calculation Checks*	
Mass of Watch Glass			Mass of Evaporating Dish		
Mass of Watch Glass and hydrate sample			Mass of Evap. Dish and hydrate sample		
Mass of hydrate sample			Mass of hydrate sample		
Mass of watch glass and dehydrated sample			Mass of Evap. Dish and dehydrated sample		
Mass of dehydrated sample			Mass of dehydrated sample		
Mass of water evolved			Mass of water evolved		
Mass of 2nd empty watch glass			Mass of 2nd empty watch glass		
Mass of 2nd watch glass and copper			Mass of 2nd watch glass and copper		
Mass of copper			Mass of copper		

1. How many grams and moles of water were in your sample of copper chloride hydrate?

Trial a: _____ grams, _____ moles

Trial b: _____ grams, _____ moles

2. How many grams and moles of copper were in your sample of copper chloride hydrate?

Trial a: _____ grams, _____ moles

Trial b: _____ grams, _____ moles

3. How many grams and moles of chlorine were in your sample of copper chloride hydrate?

Trial a: _____ grams, _____ moles

Trial b: _____ grams, _____ moles

4. What is the molar ratio of Cu **:** Cl **:** H_2O of the copper chloride hydrate?

_____

_____

5. Write the proper chemical formula for the hydrate (in format of $Cu_xCl_y \bullet zH2O$).

_____

6. Give the reaction equation between Al wire and the copper salt solution.
(Example: $Mg + 2\ HCl \rightarrow MgCl_2 + H_2$)

_____

7. Compare these two different approaches to dehydration. Area of consideration can include the consistency and quality of data, ease of the experiment and ease of experimental control, etc.