Name: _____

Section: _____

Report Form – Classification of Matter and Chemical Changes

Refer to your textbook, background information, or a dictionary to define these categories. **You will be using these terms for the classifications in this lab.**

Define:

Element –

Compound –

Heterogeneous Mixture –

Homogeneous Mixture –

Chemical Change –

Physical Change –

Part A–Pure Substances, Homogeneous Mixtures, and Heterogeneous Mixtures

Unknown Number _____

Unknown	Observation	Classification as Pure Substance, Homogeneous Mixture, or Heterogeneous Mixture Classification
Unknown Itself		
Material on Filter Paper		
Filtrate		
Material left after evaporation		

Quantitative Data and Results

Mass of Plastic Vial and Unknown	
Mass of Plastic Vial	
Mass of Unknown*	

Mass of beaker, filter paper, and Material 1 – 1st weighing	
Mass of beaker, filter paper, and Material 1 – 2nd weighing	
Mass of beaker, filter paper, and Material 1 – 3rd weighing (if necessary)	
Mass of beaker	
Mass of filter paper	
Mass of Material 1*	
% Material 1 in Unknown*	%

Mass of Evaporating Dish, Watch Glass, and Material 2 – 1st weighing	
Mass of Evaporating Dish, Watch Glass, and Material 2 – 2nd weighing	
Mass of Evaporating Dish, Watch Glass, and Material 2 – 3rd weighing (if necessary)	
Mass of Evaporating Dish	
Mass of Watch Glass Cover	
Mass of Material 2*	
% Material 2 in Unknown*	%

Show the calculations for each of the entries in the Data Table marked with * on the calculations page.

Part B–Element or Compound

Substance	Observations Before and After Heating	Classification of Original Substance as Element or Compound
Copper (II) sulfate pentahydrate	Before:	
	After:	

Part C–Homogeneous Mixtures and Pure Substances

Substance	Observation After Separation	Classification of Original Ink as Homogeneous Mixture or Pure Substance
Pen Ink 1		
Pen Ink 2		

Part D–Chemical Changes

	Observation	Evidence of Chemical Change**
sodium hydroxide and hydrochloric acid		
aqueous ammonia and cobalt nitrate		
sodium hydrogen carbonate and hydrochloric acid		
barium chloride and sodium sulfate		

** Evidence of Chemical Change
Change in color
Heat produced or absorbed
Gas produced
Solid formed when two liquids are mixed

Questions

1. Part A: Is Material 1 on the filter paper the same as Material 2 left in the evaporating dish after evaporation? Back your answer up with specific observations.

   The process of evaporating the water from the filtrate is an example of a _____ change.

2. Part C: Do you think the pen inks are the same or different? Explain.

Calculations

Show the calculations for each of the entries in the Data Table marked with * below.

Mass of Unknown

Mass of Material 1

% Material 1 in Unknown

Mass of Material 2

% Material 2 in Unknown

Add the (%Material 1 in Unknown) + (%Material 2 in Unknown)

In a perfect world, what should this sum be?

If your sum isn't perfect, identify a possible error that agrees with your results.