*Challenge Question: The mathematics professors have generally agreed that there are five different possible types of addition equations. Find the similarities and subtle differences in each of the equations. Can you classify these equations into the correct* ***five*** *different categories?*

**Safety Considerations:**

* **None**

**Materials:**

**14 sets numerical equations**

**14 sets chemical equations**

**Procedure:**

1. **Sort the numerical equations into 5 distinct groups.**
2. **Suggest names for each group.**
3. **Sort the chemical equations into 5 distinct groups.**

**Student Answer Sheet:**

**Data Table-**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Equation Set** | **Group 1** | **Group 2** | **Group 3** | **Group 4** | **Group 5** |
| **Numerical Equations** |  |  |  |  |  |
| **Chemical Equations** |  |  |  |  |  |
| **Equation Name** |  |  |  |  |  |

**Analysis Questions-**

1. Write your justification or explanation for placing your numerical equations into five different groups. What made each group unique?
2. Write a justification or explanation for placing your chemical equations into the five groups?