Name:_____ *Massing: A Means of Counting*

*Data Table:*

| Substance | Total # Atoms in 1 molecule/formula unit | Molar Mass (g/mol) | Mass of Substance + Evaporating Dish (g) | Mass of Substance (g) |
|---|---|---|---|---|
| Evaporating dish | | | | 46.12 |
| Sodium Chloride | | | 51.95 | |
| Water | | | 51.13 | |
| Sucrose ($C_{12}H_{22}O_{11}$) | | | 51.90 | |
| Chalk (calcium carbonate) | | | 50.56 | |
| Polystyrene peanut ($C_8H_8$) | | | 46.21 | |

***Calculations:***

Calculate the amount of atoms in each sample. Show your work and include the givens in the area provided:

1. Sodium Chloride

| Given & What you are looking for? | Work ( the grid) |
|---|---|
| | Answer:_____ |

2. Water

| Given & What you are looking for? | Work ( the grid) |
|---|---|
| | Answer:_____ |

3. Sucrose

| Given & What you are looking for? | Work ( the grid) |
|---|---|
| | Answer:_____ |

4. Chalk

| Given & What you are looking for? | Work ( the grid) |
|---|---|
| | Answer:_____ |

5. Polystyrene Peanut

| Given & What you are looking for? | Work ( the grid) |
|---|---|
| | Answer:_____ |

***Conclusion Questions:***

1. Which of the substances-water, sodium chloride, or sucrose- had the greatest number of moles in one teaspoon?(use calculations 1-3)_____
2. Which of the substances-water, sodium chloride, or sucrose- had the greatest number of atoms? (use calculations 1-3)

   _____
3. Which of the substances- chalk or polystyrene peanut- had the greatest number of moles in one teaspoon? (use calculations 4&5)_____
4. Which of the substances- chalk or polystyrene peanut- had the greatest number of atoms? (use calculations 4&5)

   _____