# **Unit 5 – Counting Particles - Objectives**

| Question | Response |
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| 1. State evidence for Avogadro’s Hypothesis. Use Avogadro’s Hypothesis and experimental data to determine the relative mass of molecules. |  |
| 2. Use experimental data to determine the relative mass of two objects. |  |
| 3. Use experimental data to determine the number of items in a sample without actually counting them. |  |
| 4. Given the chemical formula of a substance, determine the molar mass. |  |
| 5. Given the mass of a substance, determine1. the number of moles of the sample

b. the number of atoms or molecules in the sample |  |
| 6. Given the number of moles of a substance, find1. the mass of the sample
2. the number of atoms or molecules in the sample
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| 7. Given the formula of a compound, determine its % composition. |  |
| 8. Given data about the % composition of a sample, determine the empirical formula of the compound. |  |
| 9. Given the empirical formula and information about the molar mass of the compound, determine the molecular formula. |  |
| Vocabulary* Avogadro’s Hypothesis
* relative mass
* mole
* percent composition
* empirical formula
* Avogadro’s number
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