

Worksheet 13: Final Exam Review I

1. Name the general steps in a chemical analysis.
2. What is the difference between a quantitative analysis and a qualitative analysis?
3. Would you expect a pure chocolate bar or a piece of chocolate with a macadamia nut in the middle to be more homogeneous?
4. What is the definition of weight percent?
5. How is the definition of parts per million or parts per billion similar to or different from the definition of weight percent?
6. What equation can be used to determine volumes and concentrations resulting from dilution procedures?
7. What is the name for chemical analysis based on weighing a final product?
8. If you mix 1.00 g of CaCl_2 , which has a formal mass of 110.98, with 1.15 g of $\text{Na}_2\text{C}_2\text{O}_4$, which has a formal mass of 134.00, which is the limiting reagent given the equation below and the fact that it takes place in water?
$$\text{Ca}^{2+} + \text{C}_2\text{O}_4^{2-} \longrightarrow \text{Ca}(\text{C}_2\text{O}_4) \cdot \text{H}_2\text{O}$$

9. What is the difference between a serial and a parallel dilution? What are the advantages of each?