

C2 Topic 6 Quantitative chemistry

% calculations	
1. What is relative atomic mass?	The mass of an atom of an element
2. What is relative molecular mass?	The mass of all the elements added together, that are in a molecule
3. What is relative formula mass?	The mass of all the elements added together, that are in a chemical formula
4. How is the % of an element in a compound calculated?	From dividing the relative mass of an element in a compound by the relative formula mass of the compound
HT – Empirical formula	
5. What is empirical formula?	The simplest whole number ratio of the number of atoms of each element in a compound
6. What can we use to calculate empirical formula?	Either the masses or percentages of elements in a compound
HT – masses of reactants and products	
7. What is a balanced symbol equation?	An equation, showing a chemical reaction, where the number of atoms of each elements that make up the reactants are equalled by the number of atoms of each element that make up the products.
8. If given the masses of the reactants of a reaction what could be calculated?	The masses of the products
9. If given the masses of the products of a reaction what could be calculated?	The masses of the reactants
10. How do we calculate the number of moles of a substance?	Divide the mass of the substance by its relative formula mass
Yield calculations	
11. What is yield?	The amount of product obtained from a reaction
12. What is maximum theoretical yield?	The maximum amount of product that can be obtained from a reaction, based on the amount of reactants used
13. How is the % yield of a reaction calculated?	By dividing the yield obtained by the maximum theoretical yield, and multiplying the answer by 100
14. Why will a reaction never achieve 100 % yield?	The reaction may not go to completion Some product may be lost when separated from the reaction material Some reactions are reversible and so convert back in to reactants