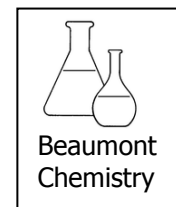


AQA AS Chemistry-Taster lesson Sheet 1



Moles Calculations- Easy

Complete these questions for summer work. Answers will be on the school website for you to check your answers.

- The Mass of 1 mole (in grams) is equal to the numerical value of the average atomic mass (from periodic table).

- 1 Calculate the number of moles in the following.
 - (a) 32 g of O₂
 - (b) 11.5 g of Na
 - (c) 36 g of Mg
 - (d) 71 g of Cl₂
- 2 Calculate the mass of the following.
 - (a) 2 mol of O₂
 - (b) 0.5 mol of Mg
 - (c) 2 mol of N₂
 - (d) 1.5 mol of Ne
- 3 Calculate the relative atomic mass (A_r) of each of the following.
 - (a) 0.1 mol of a metal has a mass of 2.3 g
 - (b) 0.25 mol of a metal has a mass of 10 g
 - (c) 0.6 mol of a metal has a mass of 14.4 g
- 4 Calculate the relative molecular mass (M_r) of each of the following.
 - (a) 0.1 mol of a compound has a mass of 4.4 g
 - (b) 0.1 mol of a compound has a mass of 3.2 g
 - (c) 0.05 mol of a compound has a mass of 3.2 g



Moles Calculations- Not so easy!

For each of the following, formulate and balance equations first before calculating masses.

- 5 What mass of iron (III) oxide would be made by reacting 50g of iron with oxygen?
- 6 What mass of sulphur needs to be burnt in oxygen to produce 5g of sulphur dioxide?
- 7 What mass of calcium oxide and carbon dioxide would be made by heating 2g of calcium carbonate?
- 8 What mass of hydrogen would be produced by adding 10g of calcium to water?
- 9 What mass of oxygen would need to be added to 0.5g of carbon to turn it all into carbon dioxide?