



## ROEDEAN MOIRA HOUSE

### Calculations in IGCSE Chemistry

*All the calculations in the specification are listed here. If they are in **bold** they are in paper 2C.*

**1.10** understand the term relative atomic mass ( $A_r$ )

**1.11** calculate the relative atomic mass of an element from the relative abundances of its isotopes.

**1.15** calculate relative formula masses ( $M_r$ ) from relative atomic masses ( $A_r$ )

**1.17 understand the term mole as the Avogadro number of particles (atoms, molecules, formulae, ions or electrons) in a substance.**

**1.18** carry out mole calculations using relative atomic mass ( $A_r$ ) and relative formula mass ( $M_r$ ).

**1.19 understand the term molar volume of a gas and use its values (24 dm<sup>3</sup> and 24 000 cm<sup>3</sup>) at room temperature and pressure (rtp) in calculations.**

**1.22** understand how the formulae of simple compounds can be obtained experimentally, including metal oxides and salts containing water of crystallization.

**1.23** calculate empirical and molecular formulae from experimental data

**1.24** calculate reacting masses using chemical equations

**1.25 calculate percentage yield**

**1.27** carry out mole calculations using volumes and molar concentrations.

**4.12 calculate molar enthalpy change from heat energy change.**

**4.16 use average bond energies to calculate the enthalpy change during a simple chemical reaction**

**1.55 recall that one faraday represents one mole of electrons**

**1.56 calculate the amounts of the products of the electrolysis of molten salts and aqueous solutions**