

Homework 2 – Group Ions, Ionic Formula and Equations

- 1) Write out the word equation for the following reactions:
 - a) Hydrogen burns in oxygen to form steam.
 - b) Hot carbon powder and chlorine gas react violently to produce carbon chloride.
 - c) Sodium metal combines with oxygen to give sodium oxide.
- 2) Write out the formula equation for the reactions in Q1.

National 5 Extension

- 1) Write the formula for the following compounds, showing your working:
 - a) Sodium nitrate
 - b) Magnesium sulfate
 - c) Ammonium chloride
 - d) Copper(I) carbonate
 - e) Calcium hydroxide
- 2) Write out the **ionic** formula for the following compounds, show your working.
 - a) Sodium chloride
 - b) Calcium iodide
 - c) Potassium oxide
 - d) Iron(III) fluoride
 - e) Lead(II) bromide
- 3) What is the difference between what the formula for a covalent molecule and the formula for an ionic substance tells us?
- 4) Write out the formula equation for the following reactions and then balance them:
 - a) aluminium + iron(III) oxide $\rightarrow$ aluminium oxide + iron
 - b) lead(IV) oxide + carbon $\rightarrow$ lead + carbon dioxide
 - c) sodium + water $\rightarrow$ sodium hydroxide + hydrogen
 - d) aluminium + chlorine $\rightarrow$ aluminium chloride