**REACTIONS FOR TOPIC 6**

Ca(s) + 2H2O(l) 🡪 Ca(OH2)(aq) + H2(g) also Sr and Ba, with increasing reactivity

Mg(s) + H2O(g) 🡪 MgO(s) + H2(g) steam only

Ba2+(aq) + SO42-(aq) 🡪 BaSO4(s) white precipitate

(solubility of sulphates decreases down Group 2)

Mg2+(aq) + 2OH-(aq) 🡪 Mg(OH)2(s) white precipitate

(solubility of hydroxides increases down Group 2)

Ca(OH)2 + 2HCl 🡪 CaCl2 + 2H2O Ca(OH)2 neutralises acidic soil

Mg(OH)2 + 2HCl 🡪 MgCl2 + 2H2O Mg(OH)2 neutralises excess stomach acid

Cl2 + 2Br- 🡪 2Cl- + Br2 chlorine is a stronger OA than bromine

Cl2 + 2I- 🡪 2Cl- + I2 chlorine is a stronger OA than iodine

Br2 + 2I- 🡪 2Br- + I2 bromine is a stronger OA than iodine

H2SO4 + Cl- 🡪 HSO4- + HCl not a redox reaction (chloride ions are not good reducing agents)

H2SO4 + 2H+ + 2Br- 🡪 SO2 + Br2 + 2H2O bromide ions are better reducing agents

H2SO4 + 6H+ + 6I- 🡪 S + 3I2 + 4H2O iodide ions are good reducing agents

H2SO4 + 8H+ + 8I- 🡪 H2S + 4I2 + 4H2O iodide ions are good reducing agents

Ag+(aq) + Cl-(aq) 🡪 AgCl(s) white precipitate

Ag+(aq) + Br-(aq) 🡪 AgBr(s) cream precipitate

Ag+(aq) + I-(aq) 🡪 AgI(s) yellow precipitate

Cl2 + 2OH- 🡪 Cl- + ClO- + H2O makes bleach (disproportionation)

Cl2 + H2O 🡪 HCl + HClO makes chloric acid, used for treating water (disproportionation)

Cl2 + H2O 🡪 4HCl + O2 In sunlight