



CHAPTER 3: CHEMICAL FORMULAE AND EQUATIONS



Extra Practice

Section A (Structured Items)

- 1 Rama wants to make 500 cm^3 of sodium carbonate solution with a concentration of 0.01 mol dm^{-3} .
 - (a) Write the formula of sodium carbonate.
 - (b) Calculate the molecular mass of sodium carbonate.
 - (c) Calculate the number of moles of sodium carbonate in 500 cm^3 of 0.01 mol dm^{-3} solution
 - (d) Calculate the total mass of sodium carbonate required.

- 2 Calcium hypochlorite, $\text{Ca}(\text{OCl})_2$, is used to kill bacteria in swimming pools. This chemical is made by reacting calcium hydroxide with chlorine. The other products formed together with calcium hypochlorite are calcium chloride and water.
 - (a) Write a balanced equation for this reaction.
 - (b) If 4 moles of chlorine are used, calculate...
 - (i) the number of moles of calcium hypochlorite are produced,
 - (ii) the number of gram of calcium hypochlorite produced.
 - (c) Calculate the number of chlorine atoms that are present in the sample of calcium hypochlorite.