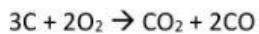


## Revision Mole Concept

(Answers to be in 2 decimal places where applicable)

### Moles and Molar Volume

- 1) What is the number of moles 40 g of  $\text{CaCO}_3$ ? moles
  
- 2) What is the volume of 0.02 mol of oxygen gas,  $\text{O}_2$ , at r.t.p?  $\text{cm}^3$
  
- 3) What is the number of moles of sodium hydroxide in 25.0  $\text{cm}^3$  of 0.02 mol/dm<sup>3</sup> sodium hydroxide solution? moles
  
- 4) The concentration of dilute hydrochloric acid is 0.05 g/dm<sup>3</sup>.
  - a) Will the concentration **increase** or **decrease** if 1000  $\text{cm}^3$  of distilled water is added?
  
  - b) What is the final concentration of the acid after adding the water? g/dm<sup>3</sup>
  
- 5) The concentration of sodium chloride solution is 1.2 mol/dm<sup>3</sup>. What is the concentration is g/dm<sup>3</sup>? g/dm<sup>3</sup>
  
- 6) 60 g of carbon burns in 200  $\text{cm}^3$  of oxygen gas according to the reaction below.



- a) Which is the limiting reactant?
  
- b) What is the mass of carbon dioxide produced? g