

1. If excess magnesium reacts with 25mL of a  $0.5 \text{ molL}^{-1}$  solution of hydrochloric acid
  - Write a balanced chemical equation
  - Write an ionic equation
  - Write a net ionic equation
  - Write half equations identifying the oxidising agent and the reductant.
  - Calculate the mass of salt produced
  - Calculate the volume of gas produced at 298K
2. If excess hydrochloric acid reacts with 75mL of a  $0.4 \text{ molL}^{-1}$  solution of sodium hydroxide acid
  - Write a balanced chemical equation
  - Write an ionic equation
  - Write a net ionic equation
  - Calculate the mass of salt produced
3. If excess of calcium carbonate reacts with 25mL of a  $0.2 \text{ molL}^{-1}$  solution of sulfuric acid
  - Write a balanced chemical equation
  - Write an ionic equation
  - Write a net ionic equation
  - Calculate the mass of salt produced
  - Calculate the volume of gas produced at 273K and 101kpa.