



#### Topic 4 Exercise 4 – Formation and Combustion Equations

1. Define the term “standard enthalpy of formation”
2. Write equations which represent the standard enthalpy of formation of the following substances:
  - a) MgO
  - b) CO<sub>2</sub>
  - c) C<sub>4</sub>H<sub>10</sub>
  - d) C<sub>2</sub>H<sub>6</sub>O
  - e) Al<sub>2</sub>O<sub>3</sub>
3. Explain why the enthalpy of formation of all elements is always zero.
4. Define the term “standard enthalpy of combustion”
5. Write equations which represent the standard enthalpy of combustion of the following substances:
  - a) CH<sub>4</sub>
  - b) C<sub>6</sub>H<sub>6</sub>
  - c) C<sub>2</sub>H<sub>6</sub>O
  - d) H<sub>2</sub>
  - e) Al
6. Identify three substances for which the enthalpy of combustion is zero.