

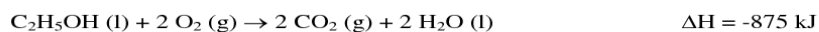
**Hess's Law Worksheet**

Name: \_\_\_\_\_

**1. Calculate  $\Delta H$  for the reaction  $4 \text{NH}_3 (\text{g}) + 5 \text{O}_2 (\text{g}) \rightarrow 4 \text{NO} (\text{g}) + 6 \text{H}_2\text{O} (\text{g})$ , from the following data.**



**2. Find  $\Delta H^\circ$  for the reaction  $2\text{H}_2(\text{g}) + 2\text{C}(\text{s}) + \text{O}_2(\text{g}) \rightarrow \text{C}_2\text{H}_5\text{OH}(\text{l})$ , using the following thermochemical data.**



**3. Calculate  $\Delta H$  for the reaction  $\text{CH}_4 (\text{g}) + \text{NH}_3 (\text{g}) \rightarrow \text{HCN} (\text{g}) + 3 \text{H}_2 (\text{g})$ , given:**

