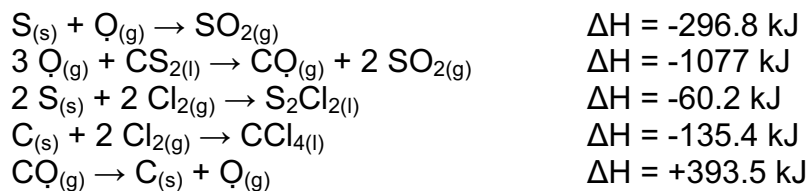


## Hess' Law Worksheet

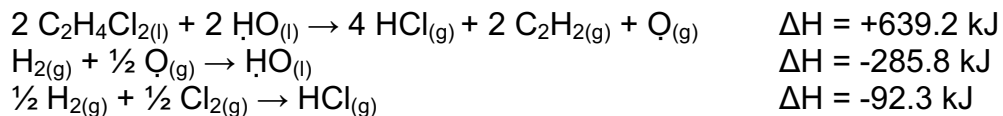
Using your knowledge of Hess' law, answer the following questions:

- 1) Calculate  $\Delta H$  for the reaction  $3 \text{Cl}_{2(g)} + \text{CS}_{2(l)} \rightarrow \text{CCl}_{4(l)} + \text{S}_2\text{Cl}_{2(l)}$ , given the following equations:



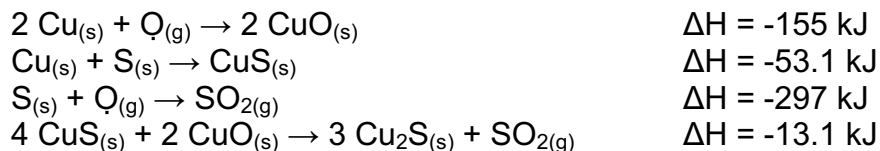
**$\Delta H = -286 \text{ kJ}$**

- 2) Calculate  $\Delta H$  for the reaction  $\text{Cl}_{2(g)} + \text{C}_2\text{H}_{2(g)} \rightarrow \text{C}_2\text{H}_4\text{Cl}_{2(l)}$ , given the following equations:



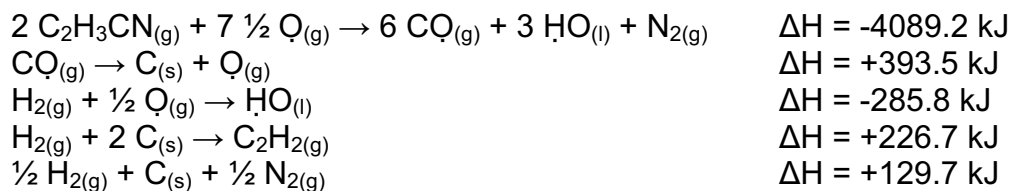
**$\Delta H = -218 \text{ kJ}$**

3) Calculate  $\Delta H$  for the reaction  $\text{CuS}_{(s)} + \text{Cu}_{(s)} \rightarrow \text{Cu}_2\text{S}_{(s)}$ , given the following equations:



$$\Delta H = 25.2 \text{ kJ}$$

4) Calculate  $\Delta H$  for the reaction  $\text{HCN}_{(g)} + \text{C}_2\text{H}_{2(g)} \rightarrow \text{C}_2\text{H}_3\text{CN}_{(g)}$  given the following equations:



$$\Delta H = 79 \text{ kJ}$$