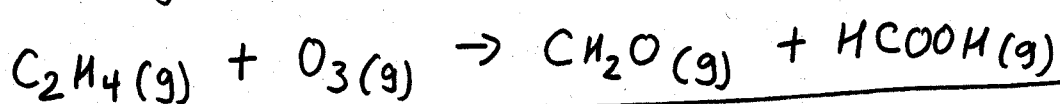
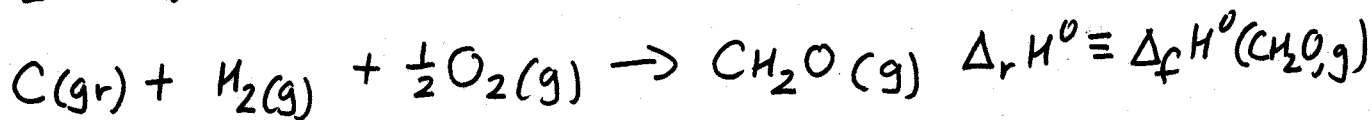
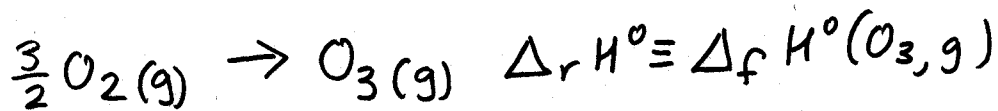
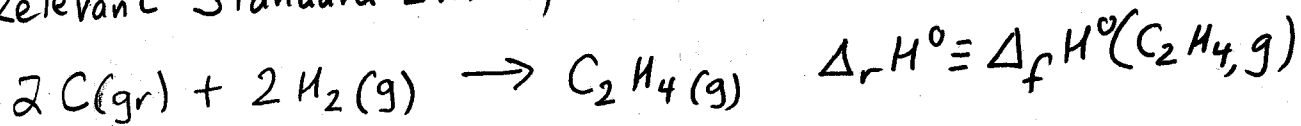
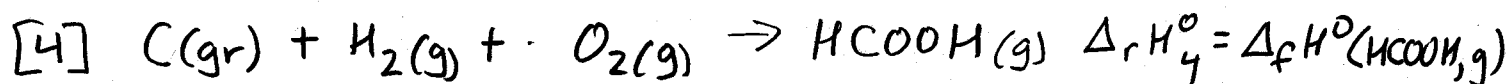
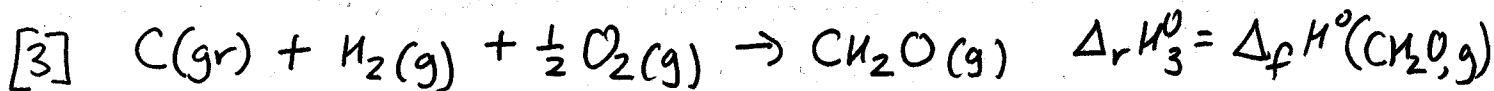
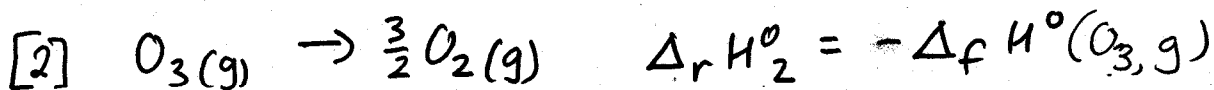
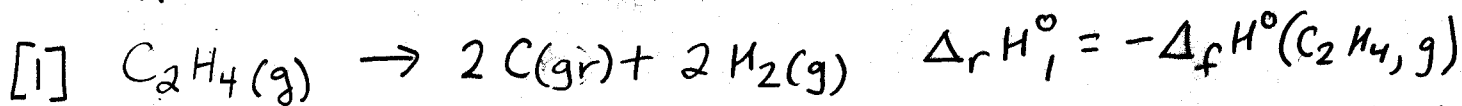


Calculating $\Delta_r H^\circ$ for

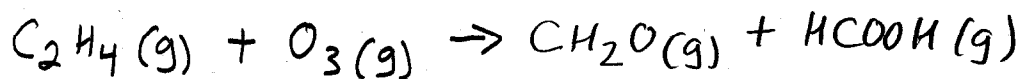
• Relevant Standard Enthalpies of Formation:



• Hypothetical Steps in the Overall Reaction:



[1] + [2] + [3] + [4]:



reaction of interest! (intermediate species cancel out)

$$\Delta_r H^\circ = \Delta_f H^\circ(\text{CH}_2\text{O}, \text{g}) + \Delta_f H^\circ(\text{HCOOH}, \text{g}) \\ - \Delta_f H^\circ(\text{C}_2\text{H}_4, \text{g}) - \Delta_f H^\circ(\text{O}_3, \text{g})$$