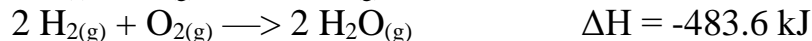


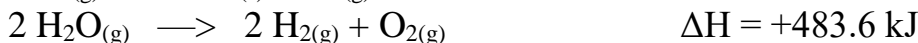
1. Calculate ΔH for $\text{H}_2\text{O}_{(g)} + \text{C}_{(s)} \longrightarrow \text{CO}_{(g)} + \text{H}_2_{(g)}$, using the following data:



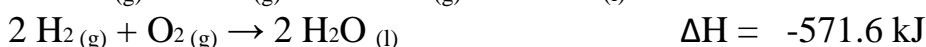
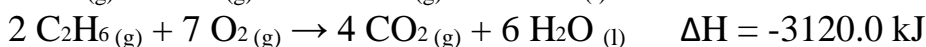
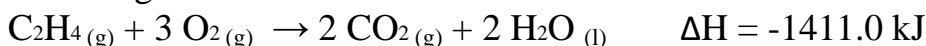
2. Calculate ΔH for the reaction $\text{CO}_{(g)} + \text{H}_2_{(g)} + \text{O}_{2(g)} \longrightarrow \text{CO}_2_{(g)} + \text{H}_2\text{O}_{(g)}$, given:



3. Calculate ΔH for the $2 \text{C}_8\text{H}_{18(l)} + 25 \text{O}_2_{(g)} \longrightarrow 16 \text{CO}_2_{(g)} + 18 \text{H}_2\text{O}_{(g)}$, based on the following evidence:



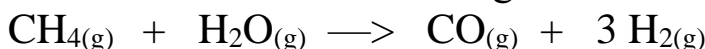
4. Calculate ΔH_r for the reaction $\text{C}_2\text{H}_4_{(g)} + \text{H}_2_{(g)} \longrightarrow \text{C}_2\text{H}_6_{(g)}$, using the following:



5. Calculate ΔH_r for the reaction $4 \text{NH}_3_{(g)} + 5 \text{O}_2_{(g)} \longrightarrow 4 \text{NO}_{(g)} + 6 \text{H}_2\text{O}_{(g)}$, given:



6. Predict ΔH° for the following reaction:



7. Find the molar enthalpy of reaction (H_r°) of ammonia in the following reaction:

