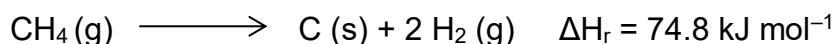




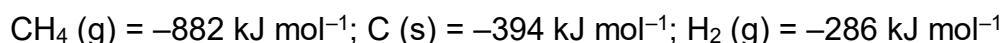
## Enthalpy Questions

1. Given that:

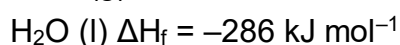
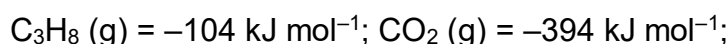


What is the  $\Delta H_f$  of  $\text{CH}_4(\text{g})$ ?

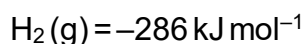
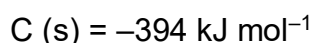
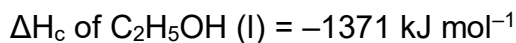
2. Calculate the  $\Delta H_f$  of methane ( $\text{CH}_4(\text{g})$ ), using the following  $\Delta H_c$  data:



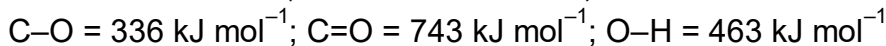
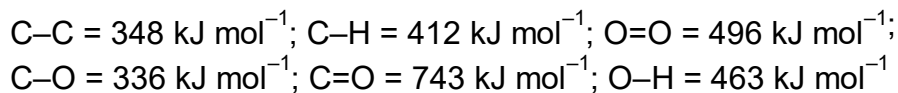
3. Calculate the  $\Delta H_c$  of propane ( $\text{C}_3\text{H}_8(\text{g})$ ), given the following:



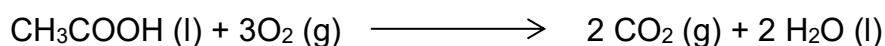
4. Calculate the  $\Delta H_f$  of ethanol ( $\text{C}_2\text{H}_5\text{OH}(\text{l})$ ), given the following:



5. Given the bond enthalpies:



Find the  $\Delta H_r$  of the following reaction:



6. Given the following:



Calculate the  $\Delta H_c$  of glucose ( $\text{C}_6\text{H}_{12}\text{O}_6(\text{s})$ ):

