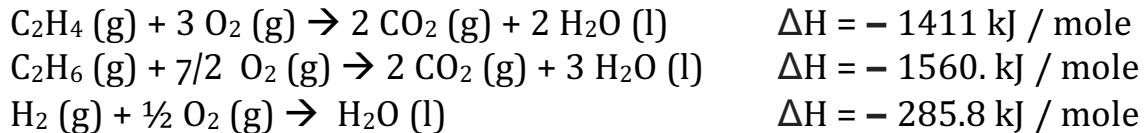


CHEM 12 Hess's Law Worksheet

1. Calculate the ΔH for the reaction: $C_2H_4(g) + H_2(g) \rightarrow C_2H_6(g)$,
from the following data:

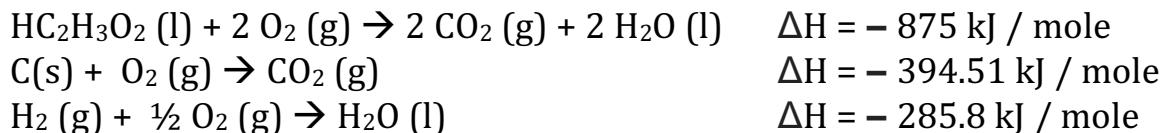


2. Calculate the ΔH for the reaction:

$4 NH_3(g) + 5 O_2(g) \rightarrow 4 NO(g) + 6 H_2O(g)$, *from the following data:*

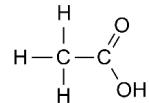


3. Find the ΔH_f° (heat of formation) for acetic acid, $HC_2H_3O_2$, using the following thermochemical data:

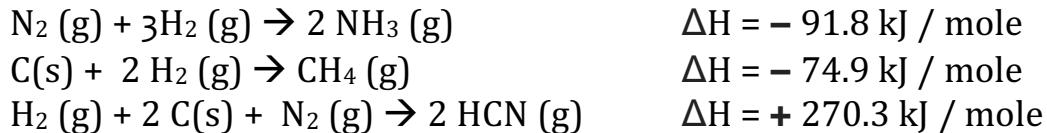


Fun Facts: C(s) is in the form of graphite.

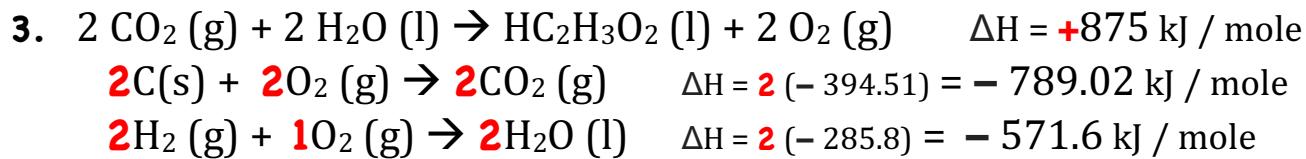
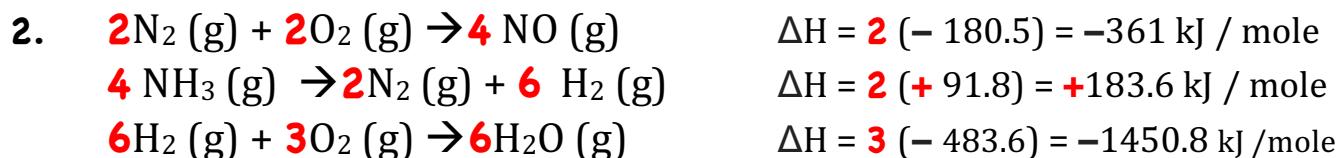
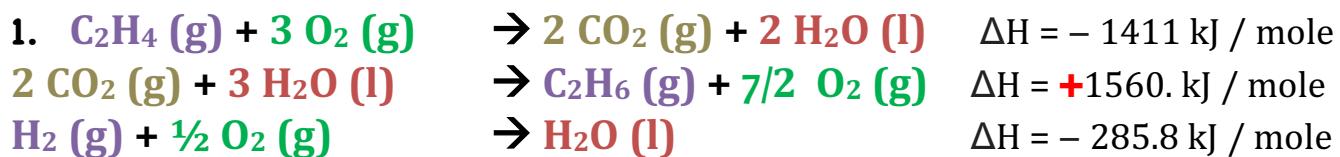
Acetic acid, $HC_2H_3O_2$ actually has the structure: CH_3COOH



4. Calculate the ΔH for the reaction: $CH_4(g) + NH_3(g) \rightarrow HCN(g) + 3H_2(g)$,
from the following data:



Answers



The heat of formation of acetic acid from its constituent elements

