

Thermochemical equations and Hess Law

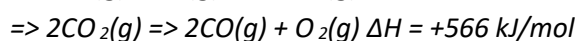
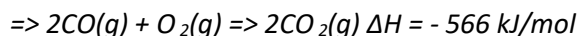
Lesson 2a

Read before attempting these questions.

A few rules apply to manipulating balanced thermochemical equations

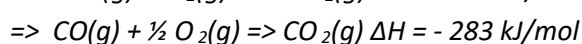
1) When reversing an equation change the sign of the ΔH

For example



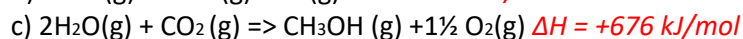
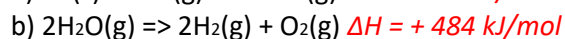
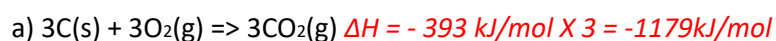
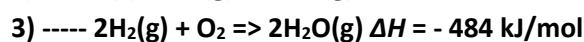
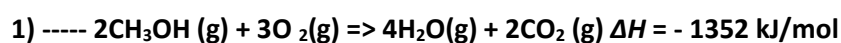
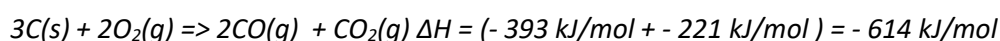
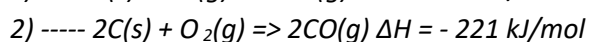
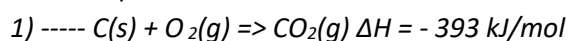
2) When multiplying the equation also multiply the ΔH

For example



3) When adding equations also add the ΔH

For example

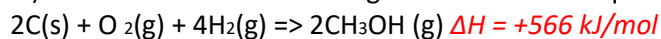


d) Find the ΔH of the following thermochemical equation below



Flip equation 2 and change the sign of the ΔH to +393 kJ/mol multiply it by 2 and add it to equation 1

e) Find the ΔH of the following thermochemical equation below



2) Given the equations below find the ΔH of $\text{C}(s) + \text{O}_2(g) \rightarrow \text{CO}_2(g) \Delta H = -394 \text{ kJ mol}^{-1}$

