

Hess's Law

↳ the enthalpy change associated with a reaction carried out in multiple steps is equal to the sum of the enthalpy changes for each individual step.

Steps! ↗ flip, multiply coefficients, or divide coefficients

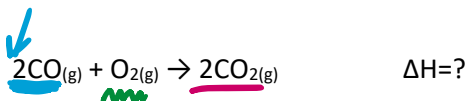
1. Manipulate elemental equations to resemble the equation of interest (overall reaction)

↳ Whatever you do to the equations, you do to the enthalpy values.

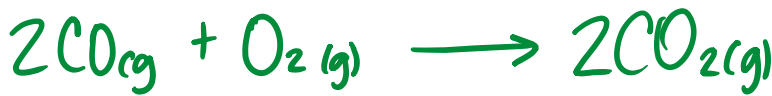
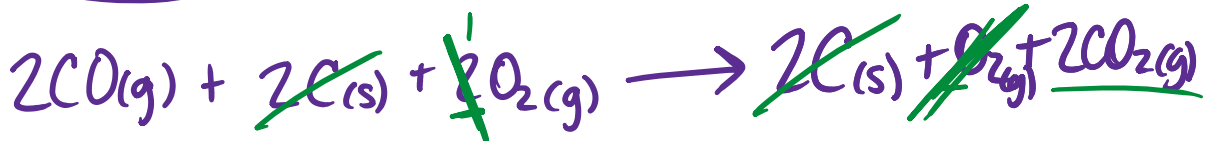
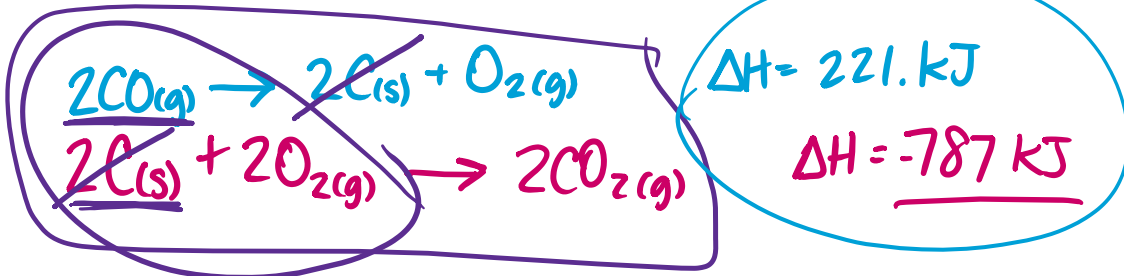
2. Combine the "new" reaction

3. Cancel out any compounds that are the same on both sides of the reaction

4. Combine the new ΔH values



Elemental Equations:



$\Delta H = -566\text{kJ/mol}$
exothermic

