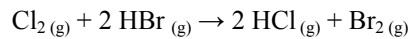


*Practice Questions Section 2.5***Hess's Law Equation**

1. The standard heats of formation of $\text{HCl}_{(g)}$ and $\text{HBr}_{(g)}$ are -92.0 kJ/mol and -36.4 kJ/mol respectively. Using this information, calculate ΔH° for the following reaction:

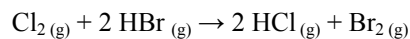


Practice Questions Section 2.5

Hess's Law Equation

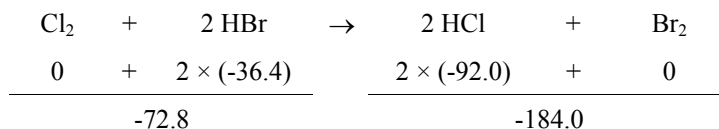
Answers

1. The standard heats of formation of $\text{HCl}_{(g)}$ and $\text{HBr}_{(g)}$ are -92.0 kJ/mol and -36.4 kJ/mol respectively. Using this information, calculate ΔH° for the following reaction:

**Solution:**

Solve for ΔH° using $\Delta H_{\text{reaction}} = \Sigma \Delta H_{\text{products}} - \Sigma \Delta H_{\text{reactants}}$

It is helpful to write ΔH_f values directly below the reaction participants, and find the sum of the reaction and product sides of the equation before using that formula:



$$\begin{aligned} \Delta H_{\text{reaction}} &= \Sigma \Delta H_{\text{products}} - \Sigma \Delta H_{\text{reactants}} \\ &= (-184.0) - (-72.8) \\ &= \mathbf{-111.2 \text{ kJ}} \quad \mathbf{\text{Answer}} \end{aligned}$$