

1.51)

Although we don't have ΔH for the reaction, we can imagine it as a two-step process: elemental decomposition from glucose and oxygen followed by recombination into carbon dioxide and water.

$$\begin{aligned}\text{Thus, } \Delta H &= -\Delta H_f(\text{glucose}) + 6\Delta H_f(\text{CO}_2 + \text{H}_2\text{O}) \\ &= 1273 + 6(-393.51 - 285.83) \quad (\text{kJ}) \\ &= -2803 \text{ kJ} \quad (\text{for 1 mole}).\end{aligned}$$