Bottom of Form

**Part B**

The combustion of pentane, \rm C_5H_{12}, occurs via the reaction

\rm C_5H_{12}(g) + 8O_2(g)\rightarrow 5CO_2(g) + 6H_2O(g)

with heat of formation values given by the following table:

|  |  |
| --- | --- |
| Substance | \Delta H^\circ_{\rm f} (\rm kJ/mol) |
| \rm C_5H_{12}(g) | -35.1 |
| \rm CO_2(g) | -393.5 |
| \rm H_2O(g) | -241.8 |

Calculate the enthalpy for the combustion of pentane

**Express your answer in kilojoules using four significant figures.**

|  |  |  |
| --- | --- | --- |
| \Delta H^\circ_{\rm rxn} = |  | \rm kJ |
| **Try Again; 4 attempts remaining** | | |

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