

Enthalpy \rightarrow Energy (J or kJ)
System

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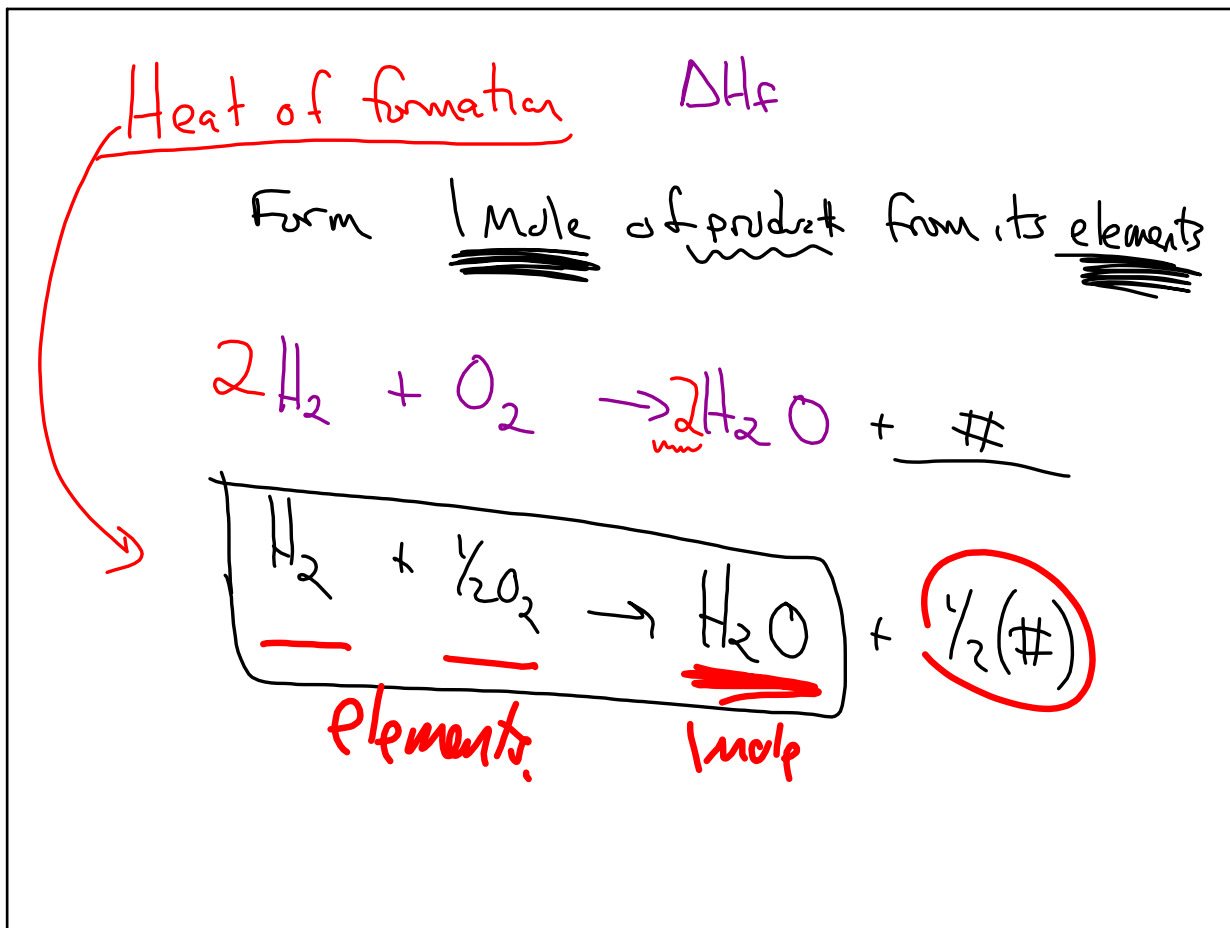
Endothermic $\oplus \Delta H$ Exothermic $\ominus \Delta H$

$$\Delta H_{rxn} = [n \sum \Delta H_{prod}] - [n \sum \Delta H_{react}]$$

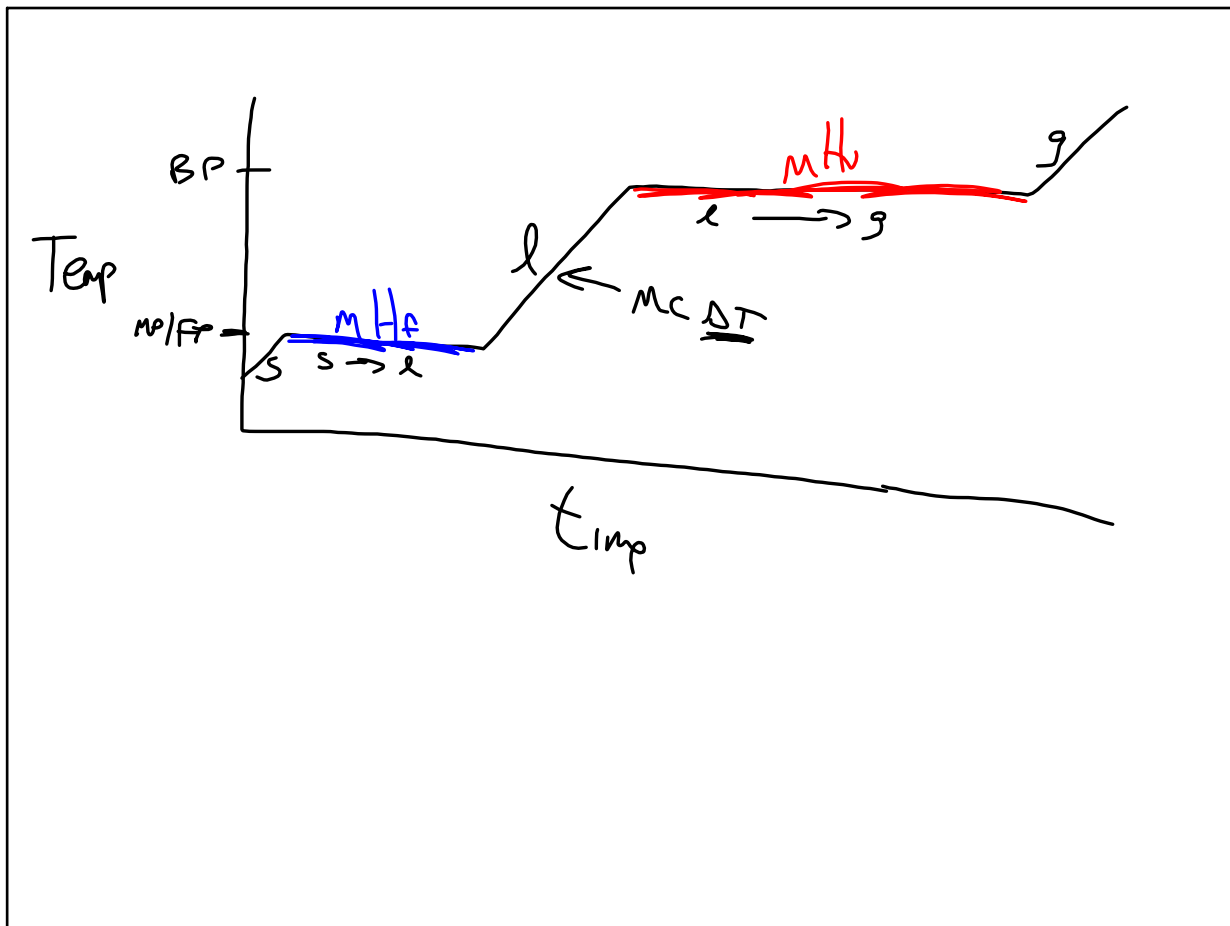
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<p>Specific heat $Q = m c \Delta T$</p> <p style="text-align: center;">$\frac{\text{J}}{\text{g}^\circ\text{C}}$</p>	<p>Molar Specific heat</p> <p style="text-align: center;">$\frac{\text{J}}{\text{Mole}^\circ\text{C}}$</p>	<p>heat Capacitor</p> <p style="text-align: center;">$\frac{\text{J}}{^\circ\text{C}}$</p>
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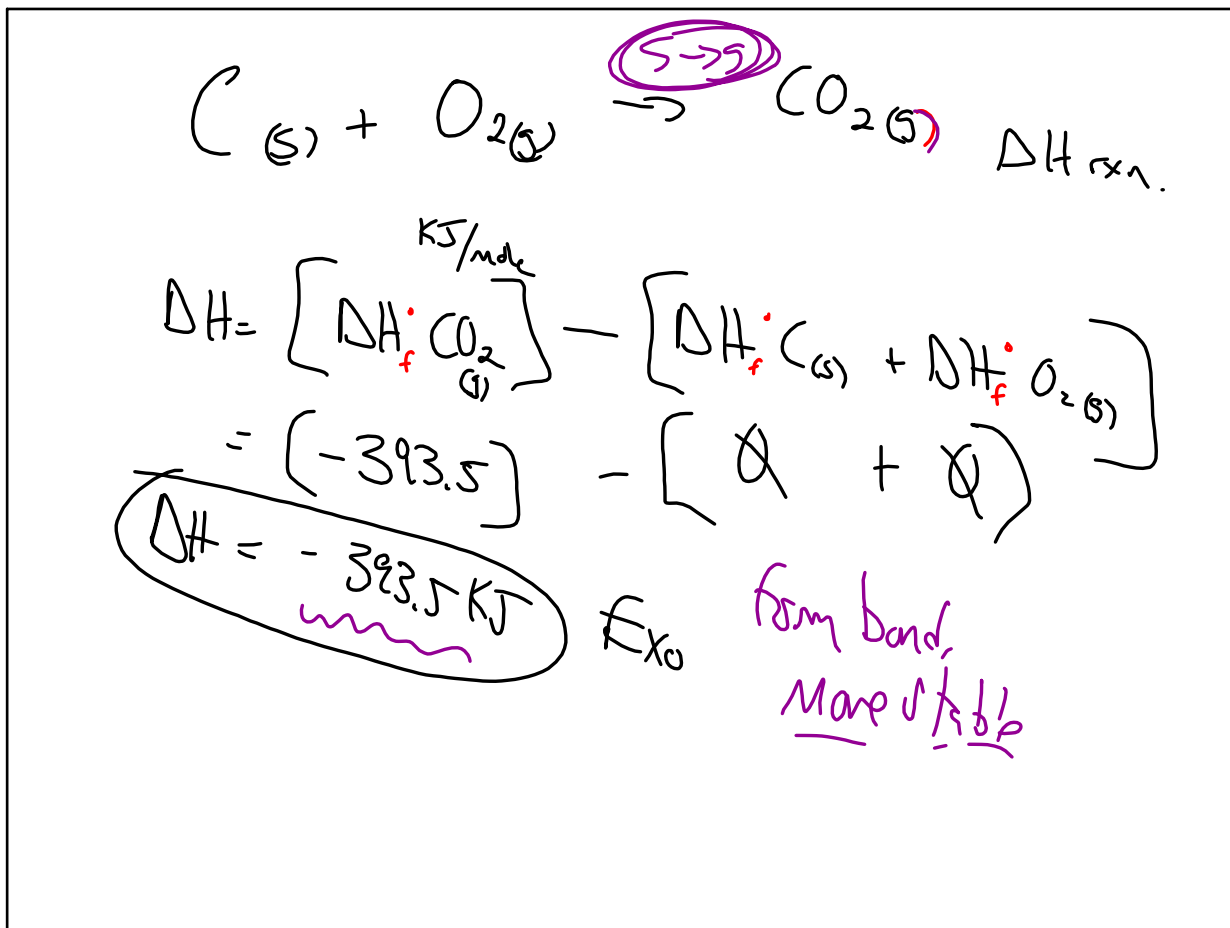
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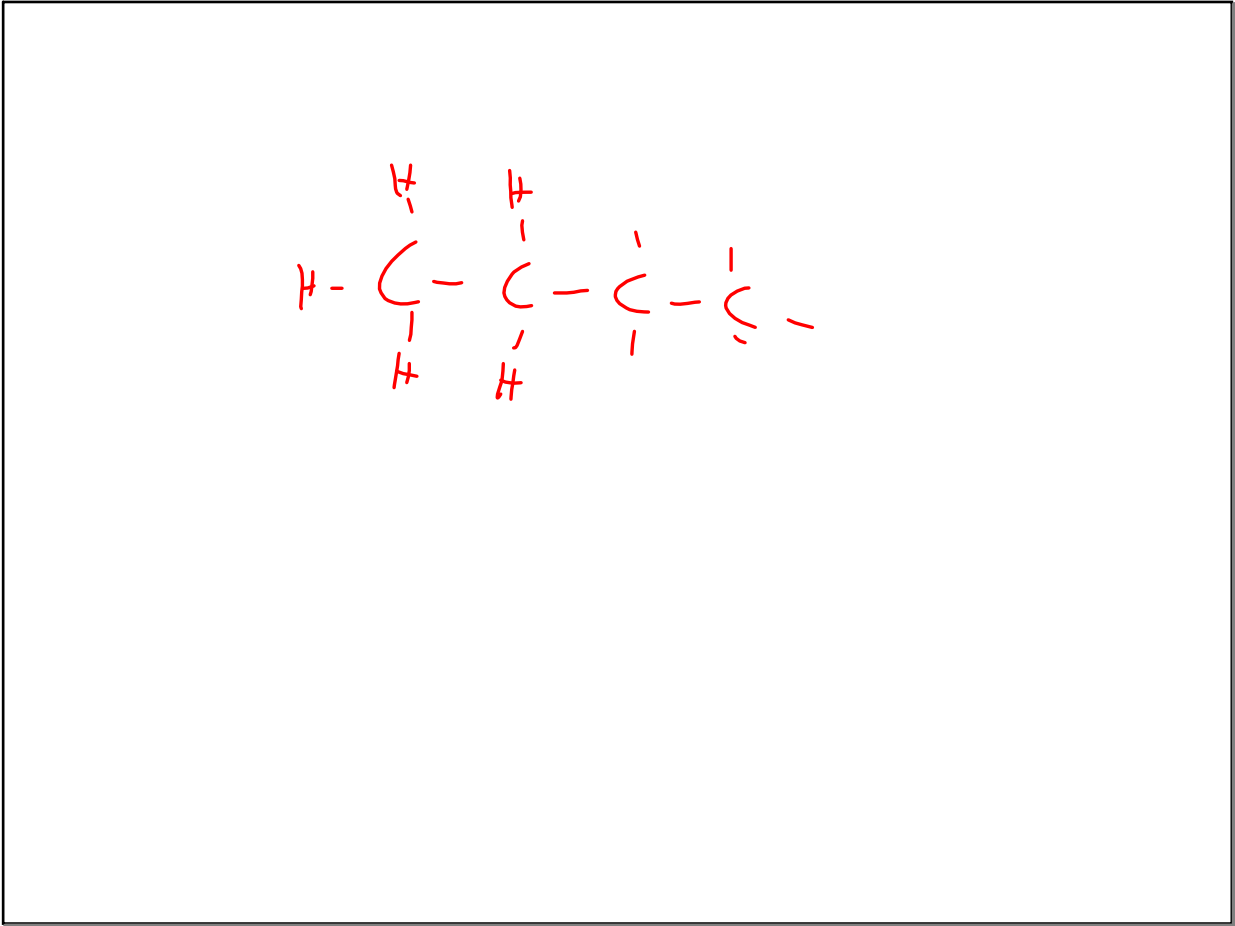


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ΔH_f° ← Standard condition.
(25°C, 1atm)

formats
 ΔH_{rxn} , H_c , H_{fusion}

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Oct 27-2:27 PM

(22) $\text{Fe} \begin{matrix} \text{①} \\ 20^\circ \text{ start} \\ \text{gain} \end{matrix}$ $\text{H}_2\text{O} \begin{matrix} \text{②} \\ 50^\circ \text{ start} \\ \text{lose} \end{matrix}$ $\boxed{T_F}$

$$m c \Delta T = m c \Delta T$$

$$\underline{(263.4)(0.45)(T_F - 20)} = (90)(4.18)(50 - T_F)$$

↑ SAME ↑

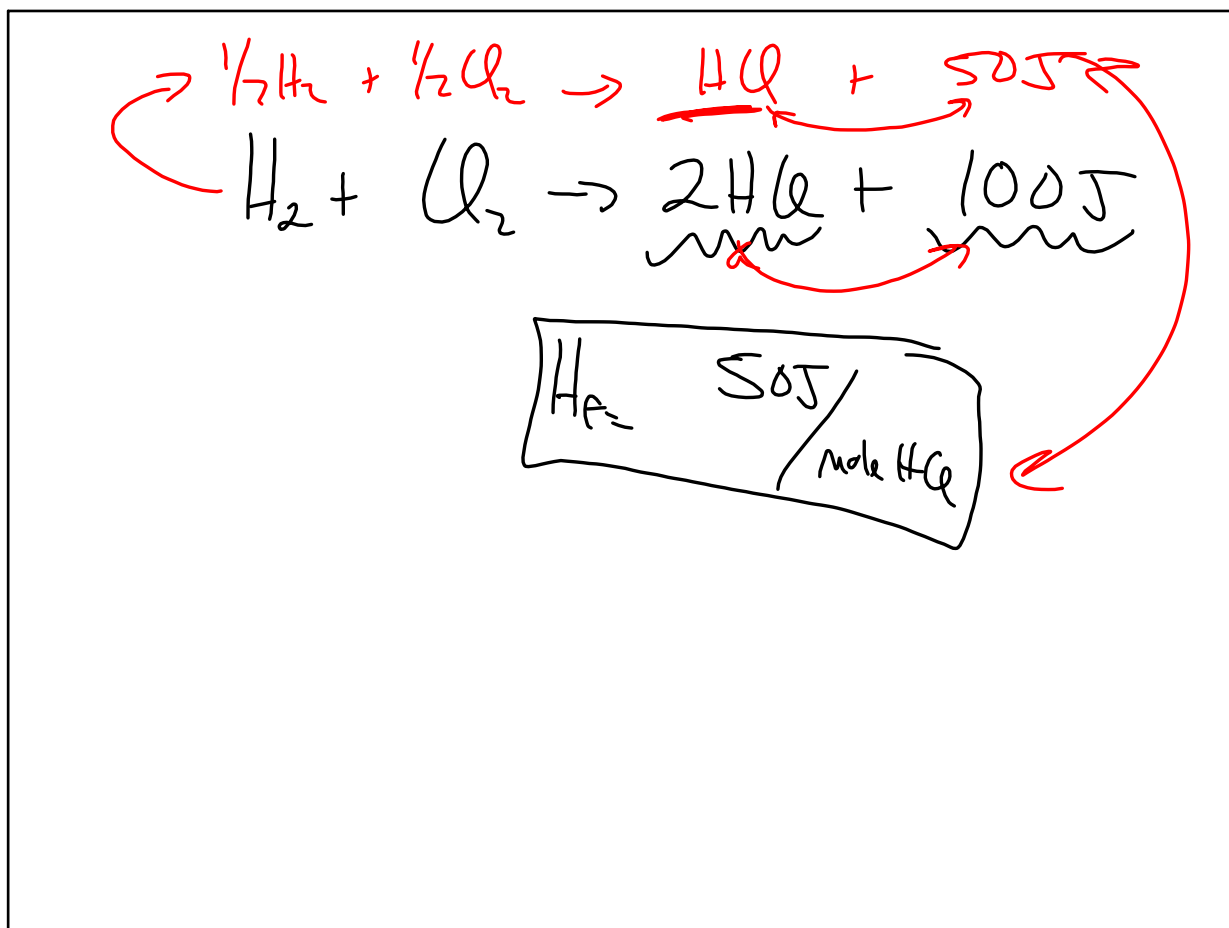
$$118.53(T_F - 20) = 376.2(50 - T_F)$$

$$118.53 T_F - 2370.6 = 18825 - 376.2 T_F$$

$$\begin{array}{r} +376.2 T_F \quad +2370.6 \\ \hline 494.73 T_F = 21195.6 \\ \hline 494.73 \end{array}$$

$$\boxed{T_F = 42.84^\circ \text{C}}$$

Oct 27-2:31 PM



Oct 27-2:39 PM