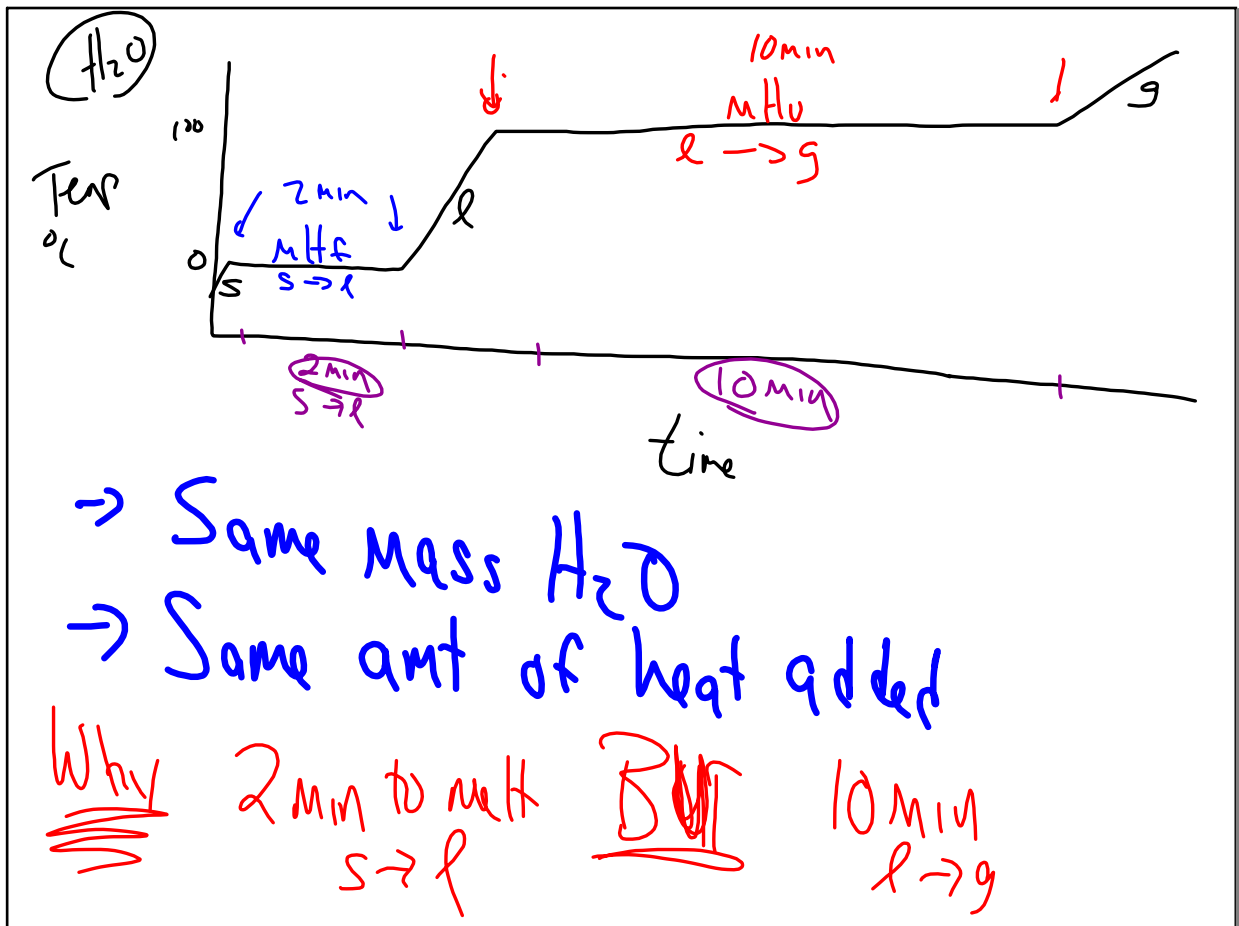


Oct 23-8:03 AM



Oct 23-8:15 AM

## Bomb Calorimeter

↳ THERMOS

$$2 \text{CH}_6\text{N}_2(\text{g}) + \text{SO}_2(\text{g}) \rightarrow 2\text{N}_2(\text{g}) + 2\text{CO}_2(\text{g}) + 6\text{H}_2\text{O}(\text{l})$$

4g  
~~25°C → 39.5°C~~  $\Delta T = 14.5^\circ$  Find  $\frac{\text{KJ}}{\text{Mole CH}_6\text{N}_2}$

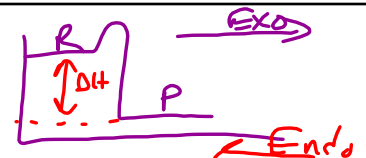
~~7.794 KJ~~  
~~?~~

7.794 KJ	14.5	46g CH <sub>6</sub> N <sub>2</sub>
		4g CH <sub>6</sub> N <sub>2</sub>   1 mole CH <sub>6</sub> N <sub>2</sub>

1299.65 KJ / Mole (CH<sub>6</sub>N<sub>2</sub>)

Oct 23-8:27 AM

## Hess's Law



STEP 1  
 $\text{C}(\text{s}) + \text{O}_2(\text{g}) \rightarrow \text{CO}_2(\text{g}) \quad \Delta H = -393.5 \text{ KJ}$

STEP 2  
 $\text{CO}(\text{g}) + \frac{1}{2}\text{O}_2(\text{g}) \rightarrow \text{CO}_2(\text{g}) \quad \Delta H = -283 \text{ KJ}$

$\text{C}(\text{s}) + \frac{1}{2}\text{O}_2 \rightarrow \text{CO} \quad \Delta H = ?$

STEPS

$\text{C}(\text{s}) + \frac{1}{2}\text{O}_2(\text{g}) \rightarrow \text{CO}_2(\text{g}) \quad \Delta H = -393.5 \text{ KJ}$

$\text{CO}_2(\text{g}) \rightarrow \text{CO}(\text{g}) + \frac{1}{2}\text{O}_2(\text{g}) \quad \Delta H = +283 \text{ KJ}$

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$\text{C}(\text{s}) + \frac{1}{2}\text{O}_2(\text{g}) \rightarrow \text{CO}(\text{g}) \quad \Delta H = -110.5$

Oct 23-8:36 AM

HW  
S / S6 + 64

Oct 23-8:46 AM