

### B. Eksplorasi



#### Model 7 persamaan kimia dan persamaan termokimia

##### Persamaan Kimia

- $C_{(s)} + O_{2(g)} \rightarrow CO_{2(g)}$
- $S_{(s)} + O_{2(g)} \rightarrow SO_{2(g)}$
- $CH_{4(g)} + 2O_{2(g)} \rightarrow CO_{2(g)} + 2H_2O_{(l)}$

##### Persamaan Termokimia

- |  |                                    |
|--|------------------------------------|
| 1. $C_{(s)} + O_{2(g)} \rightarrow CO_{2(g)}$                  | $\Delta H = -393,5 \text{ kJ/mol}$ |
| $2C_{(s)} + 2O_{2(g)} \rightarrow 2CO_{2(g)}$                  | $\Delta H = -787 \text{ kJ}$       |
| $CO_{2(g)} \rightarrow C_{(s)} + O_{2(g)}$                     | $\Delta H = +393,5 \text{ kJ/mol}$ |
| 2. $S_{(s)} + O_{2(g)} \rightarrow SO_{2(g)}$                  | $\Delta H = -296,9 \text{ kJ/mol}$ |
| $2S_{(s)} + 2O_{2(g)} \rightarrow 2SO_{2(g)}$                  | $\Delta H = -593,8 \text{ kJ}$     |
| $SO_{2(g)} \rightarrow S_{(s)} + O_{2(g)}$                     | $\Delta H = +296 \text{ kJ/mol}$   |
| 3. $CH_{4(g)} + 2O_{2(g)} \rightarrow CO_{2(g)} + 2H_2O_{(l)}$ | $\Delta H = -890,5 \text{ kJ/mol}$ |
| $2CH_{4(g)} + 4O_{2(g)} \rightarrow 2CO_{2(g)} + 4H_2O_{(l)}$  | $\Delta H = -1.781 \text{ kJ}$     |

**C. Pembentukan Konsep**



Berdasarkan model 7 di atas, jawablah pertanyaan berikut ini!

1. Jelaskanlah perbedaan persamaan kimia dan persamaan termokimia!  
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2. Jika persamaan termokimia dibalik bagaimanakah nilai perubahan entalpi ( $\Delta H$ )?  
 Jelaskanlah jawaban Anda!  
 .....  
 .....  
 .....
3. Jika persamaan termokimia dibagi atau dikali dengan faktor n bagaimanakah nilai  
 perubahan entalpi ( $\Delta H$ )? Jelaskanlah jawaban Anda!  
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