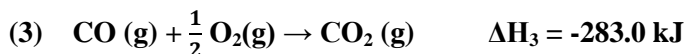
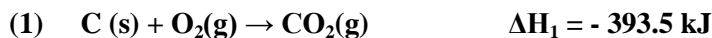


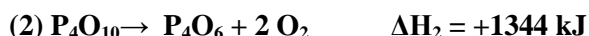
تمرین های تکمیلی قانون هس

در هر یک از تمرین های زیر ΔH واکنش مجهول را از روی واکنش های داده شده حساب کنید.

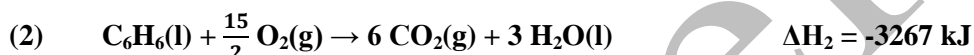
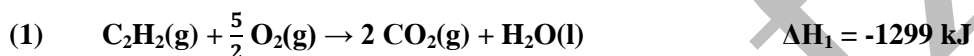
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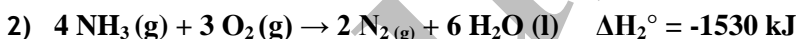
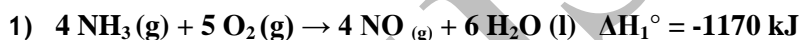
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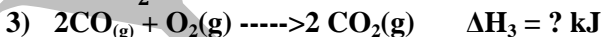
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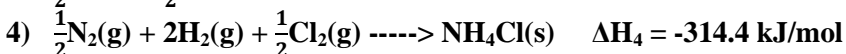
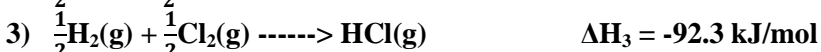
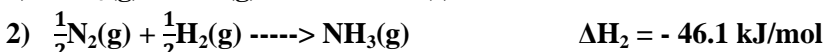
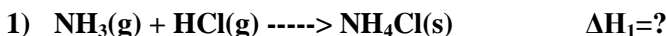
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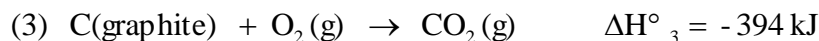
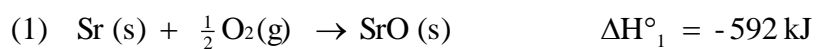
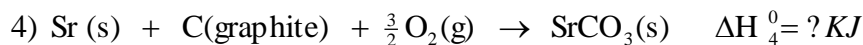


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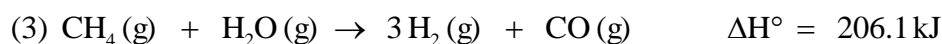
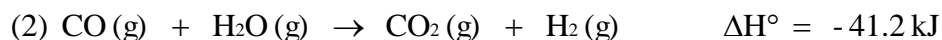
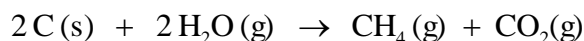


تمرین های تکمیلی قانون هس

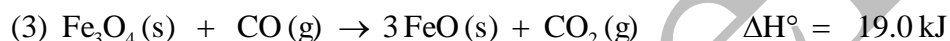
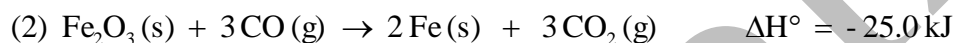
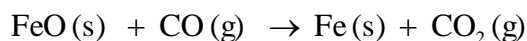
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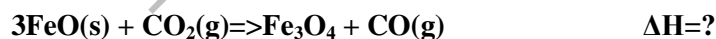
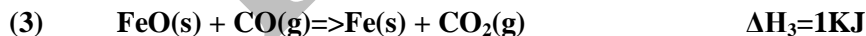
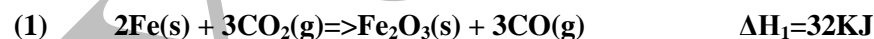
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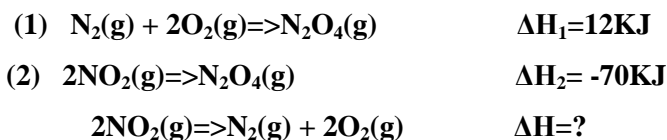


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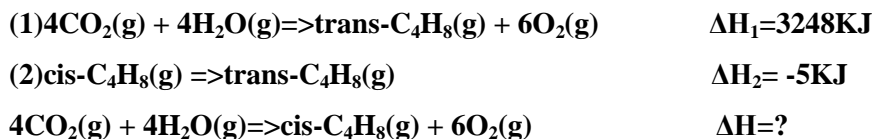


تمرین های تکمیلی قانون هس

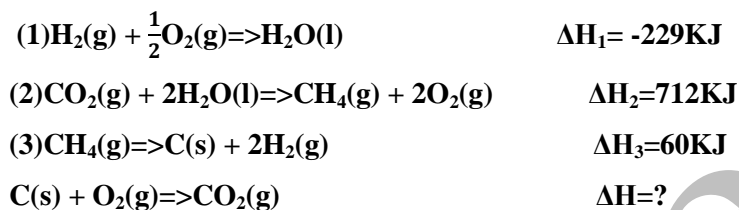
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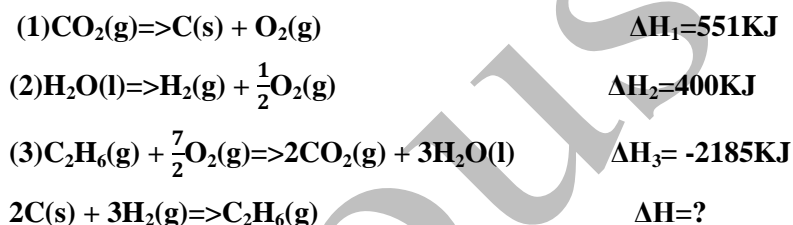
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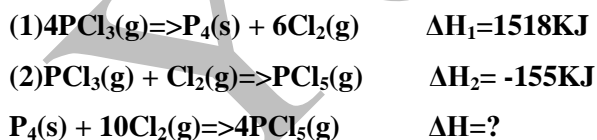
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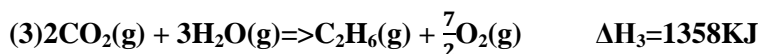
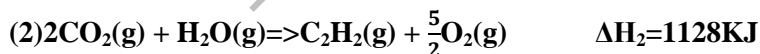
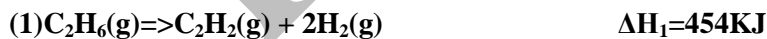
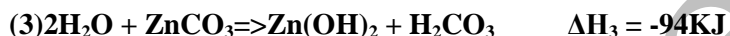
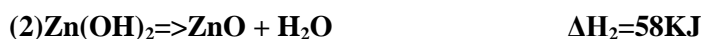
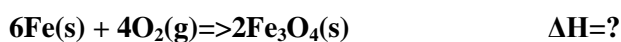
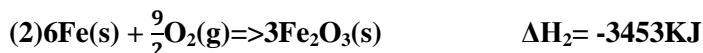
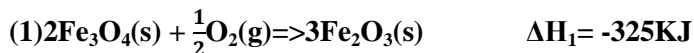
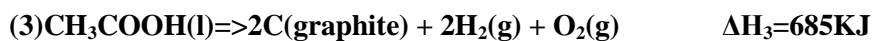
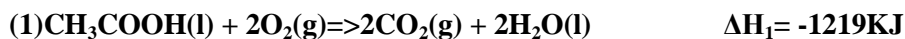


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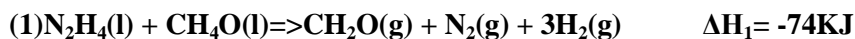
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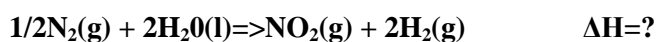
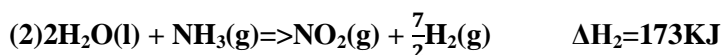
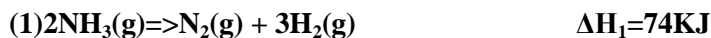


تمرین های تکمیلی قانون هس

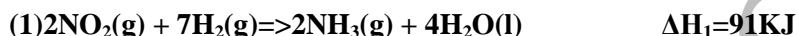
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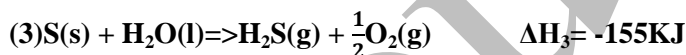
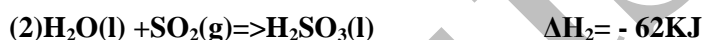
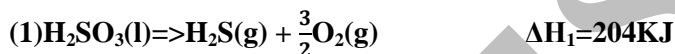
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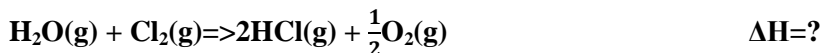
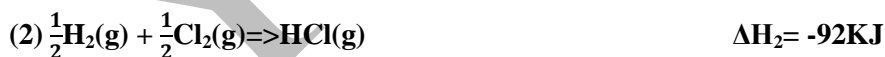
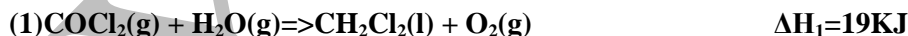
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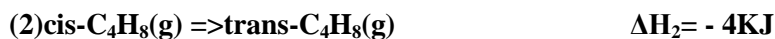
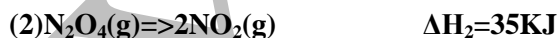
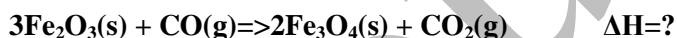
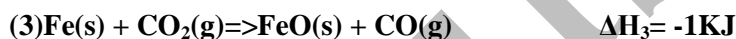
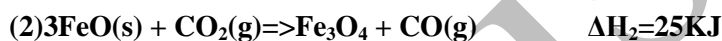
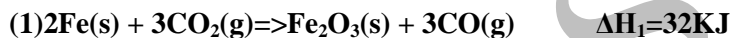
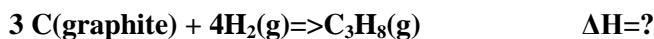
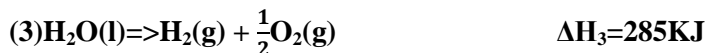
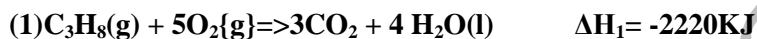
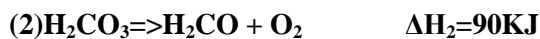
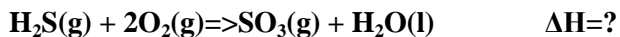
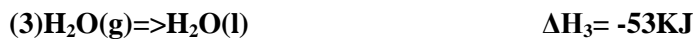
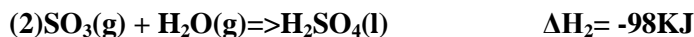


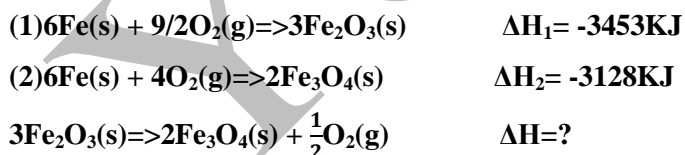
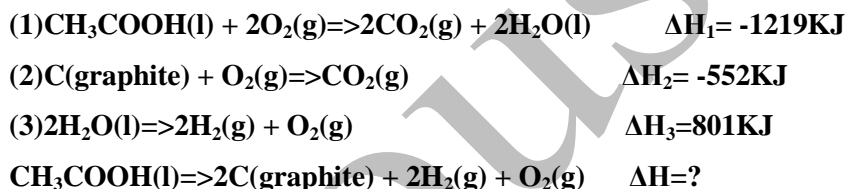
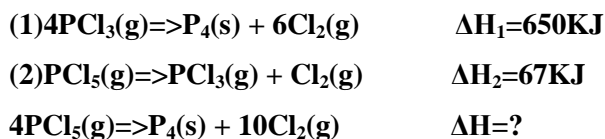
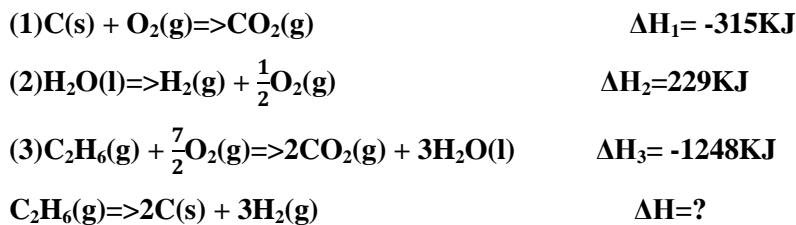
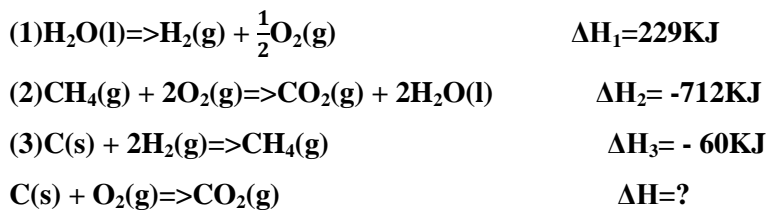
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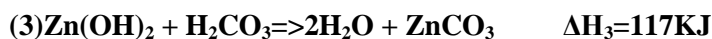




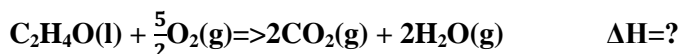
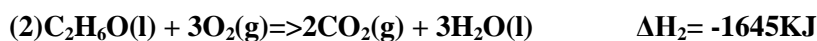


تمرین های تکمیلی قانون هس

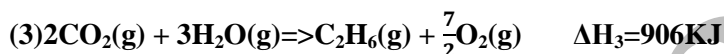
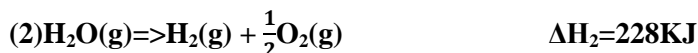
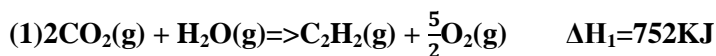
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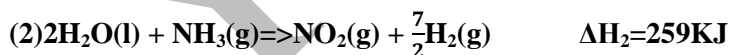
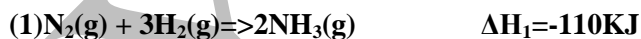
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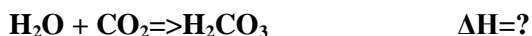
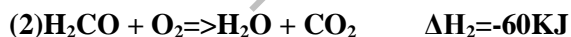
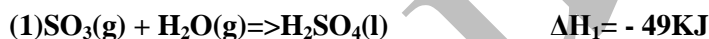
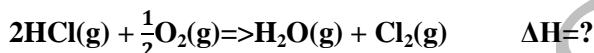
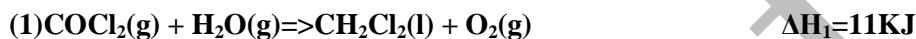
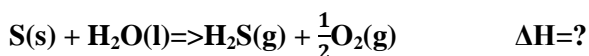
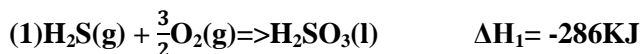
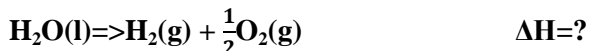
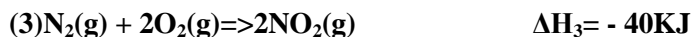
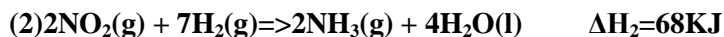
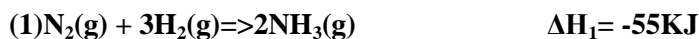


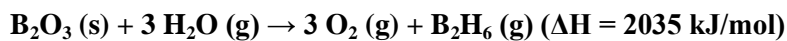
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- 1) $\text{H}_2\text{O}(\text{l}) \rightarrow \text{H}_2\text{O}(\text{g})$ $(\Delta H_1 = 44 \text{ kJ/mol})$
- 2) $\text{H}_2(\text{g}) + \frac{1}{2}\text{O}_2(\text{g}) \rightarrow \text{H}_2\text{O}(\text{l})$ $(\Delta H_2 = -286 \text{ kJ/mol})$
- 3) $2 \text{B}(\text{s}) + 3 \text{H}_2(\text{g}) \rightarrow \text{B}_2\text{H}_6(\text{g})$ $(\Delta H_3 = 36 \text{ kJ/mol})$
- 4) $2 \text{B}(\text{s}) + \frac{3}{2}\text{O}_2(\text{g}) \rightarrow \text{B}_2\text{O}_3(\text{s})$ $(\Delta H_4 = ?)$

