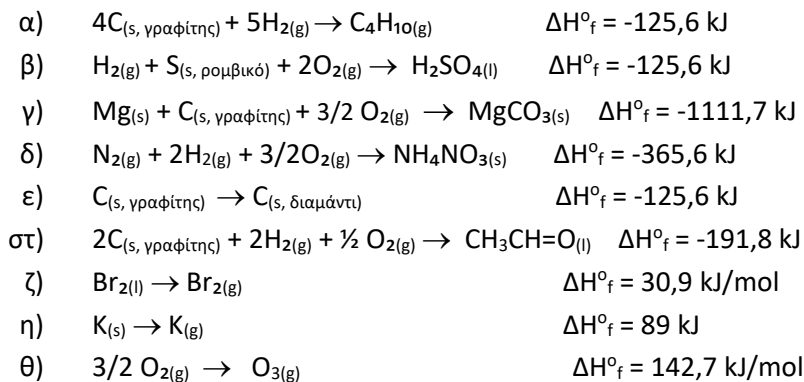


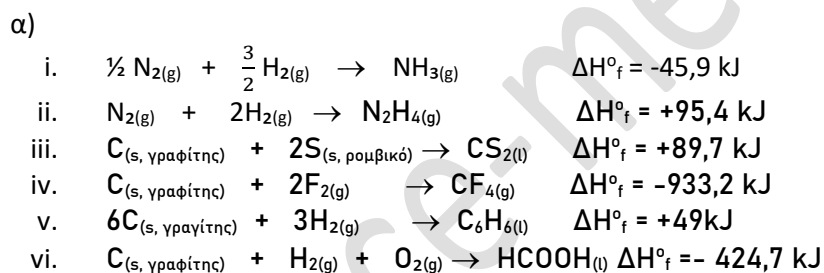
ΑΣΚΗΣΗ 9.54



ΑΣΚΗΣΗ 9.55

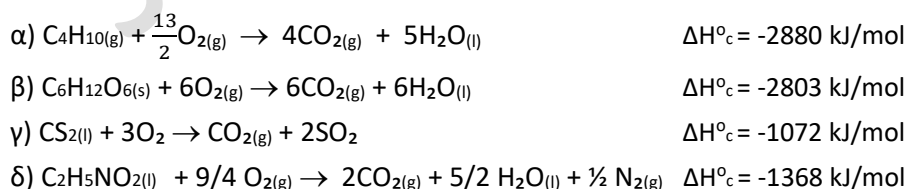
(α), (β), (δ), (θ), (ι)

ΑΣΚΗΣΗ 9.56



β) Αυτό συμβαίνει στις εξώθερμες αντιδράσεις, δηλ. στις i, iv, vi.

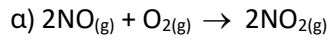
ΑΣΚΗΣΗ 9.57



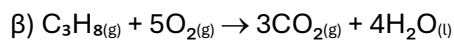
ΑΣΚΗΣΗ 9.58

(α), (β), (ε), (στ), (ζ)

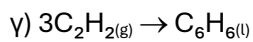
ΑΣΚΗΣΗ 9.59



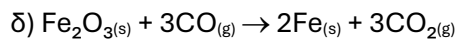
$$\Delta H_{\text{αντ}} = 2\Delta H_{f(\text{NO}_2)} - 2\Delta H_{f(\text{NO})} - \cancel{\Delta H_{f(\text{O}_2)}}^0 = 2\Delta H_{f(\text{NO}_2)} - 2\Delta H_{f(\text{NO})}$$



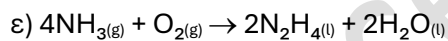
$$\Delta H_{\text{αντ}} = 3\Delta H_{f(\text{CO}_2)} + 4\Delta H_{f(\text{H}_2\text{O})} - \Delta H_{f(\text{C}_3\text{H}_8)} - \cancel{5\Delta H_{f(\text{O}_2)}}^0 = 2\Delta H_{f(\text{NO}_2)} - 2\Delta H_{f(\text{NO})}$$



$$\Delta H_{\text{αντ}} = \Delta H_{f(\text{C}_6\text{H}_6)} - 3\Delta H_{f(\text{C}_2\text{H}_2)}$$



$$\Delta H_{\text{αντ}} = 3\Delta H_{f(\text{CO}_2)} + \cancel{2\Delta H_{f(\text{Fe})}}^0 - \Delta H_{f(\text{Fe}_2\text{O}_3)} - 3\Delta H_{f(\text{CO})}$$



$$\Delta H_{\text{αντ}} = 2\Delta H_{f(\text{N}_2\text{H}_4)} + 2\Delta H_{f(\text{H}_2\text{O})} - 4\Delta H_{f(\text{NH}_3)} - \cancel{\Delta H_{f(\text{O}_2)}}^0$$