

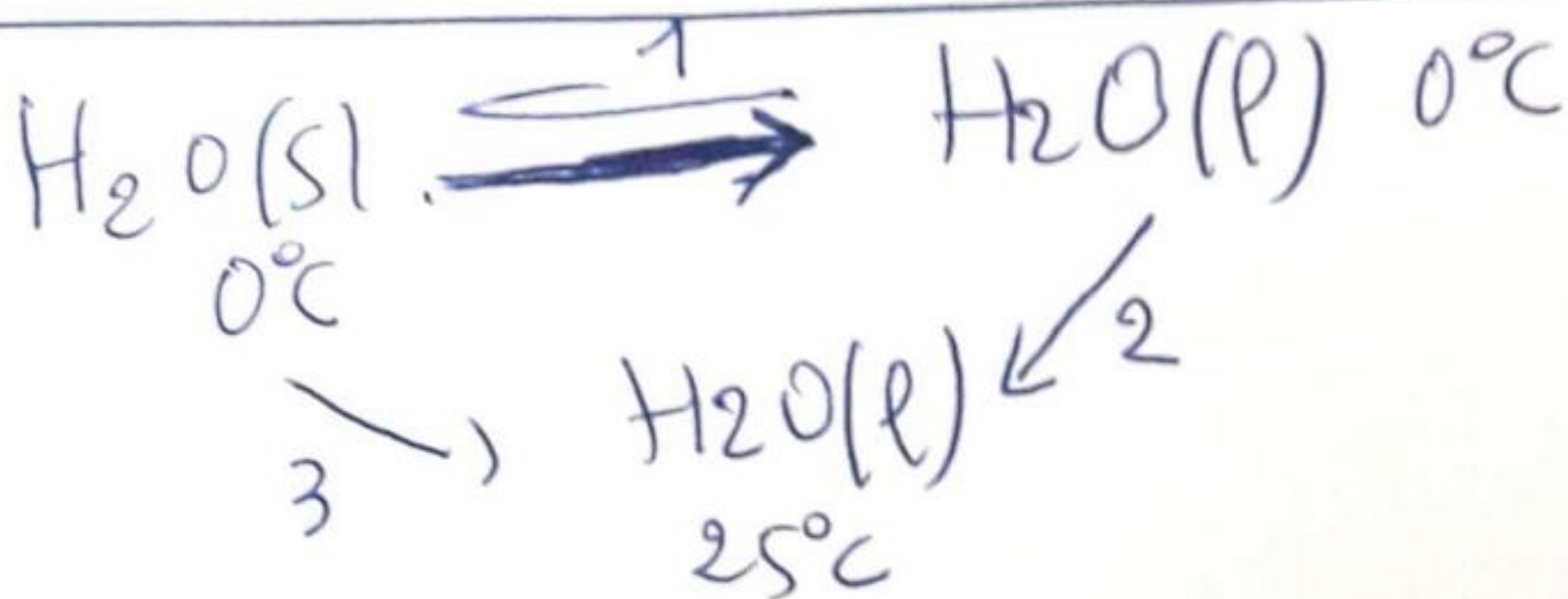
20/1 ΔS • $\Delta S_1 = \frac{m \Delta H_{\text{fusion}}}{T_{\text{fusion}}} = \frac{2 \times 5,94 \cdot 10^3}{273} = 43,5 \text{ J/K}$

• $\Delta S_3 = \int_{298}^{288,5} 20 C_p \text{H}_2\text{O}(l) \frac{dT}{T}$
 $= 20 \times 75,25 \ln \frac{288,5}{298} = -48,7 \text{ J/K}$

• $\Delta S_2 = \int_{273}^{288,5} 24 \times 75,25 \frac{dT}{T}$
 $= 24 \times 75,25 \ln \frac{288,5}{273} = 8,31 \text{ J/K}$

$\Rightarrow \Delta S = 43,5 - 48,7 + 8,31 = 3,11 \text{ J/K}$

Exercise 4 : 10/1



$\Delta S_1 \neq \Delta S_2 = \Delta S_3$

• $\Delta S_1 = \frac{m \Delta H_{\text{fus}}}{273} = \frac{1 \times 1440}{273}$

$\Delta S_2 = \int_{273}^{298} m \text{H}_2\text{O}(l) C_p(\text{H}_2\text{O}(l)) \frac{dT}{T}$

$\Delta S_3 = S^\circ_{298} \text{H}_2\text{O}(l) - S^\circ_{273} \text{H}_2\text{O}(s)$

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