Subiectul B. ELEMENTE DE TERMODINAMICĂ

II.a.	$\mu_1 = 2 \cdot m_{r,N}$; $\mu_2 = (m_{r,C} + m_{r,O})$ Rezultat final: $\mu_1 = 28\,\text{g/mol}$; $\mu_2 = 28\,\text{g/mol}$
b.	$p_1 \cdot \dfrac{V}{2} = \dfrac{m_1 \cdot R \cdot T_1}{\mu_1}$ $p_2 \cdot \dfrac{v}{2} = \dfrac{m_2 \cdot R \cdot T_2}{\mu_2}$ $p_1 = p_2$ $\dfrac{m_1}{m_2} = \dfrac{\mu_1 T_2}{\mu_2 T_1}$ Rezultat final: $\dfrac{m_1}{m_2} = 1{,}03$
c.	$N_1 = N_A \cdot m_1 / \mu_1$; $N_2 = N_A \cdot m_2 / \mu_2$ Rezultat final: $N_1 / N_2 = m_1 / m_2 \cong 1{,}035 \Rightarrow$ sunt mai multe molecule de azot
d.	$p_1' \cdot (\dfrac{V}{2} + \Delta V) = \dfrac{m_1 \cdot R \cdot (T_1 + \Delta T)}{\mu_1}$; $p_2' \cdot (\dfrac{V}{2} - \Delta V) = \dfrac{m_2 \cdot R \cdot T_2}{\mu_2}$ $p_1' = p_2'$ Rezultat final: $\Delta V = 0{,}1\,\text{dm}^3 = 10^{-4}\,\text{m}^3$