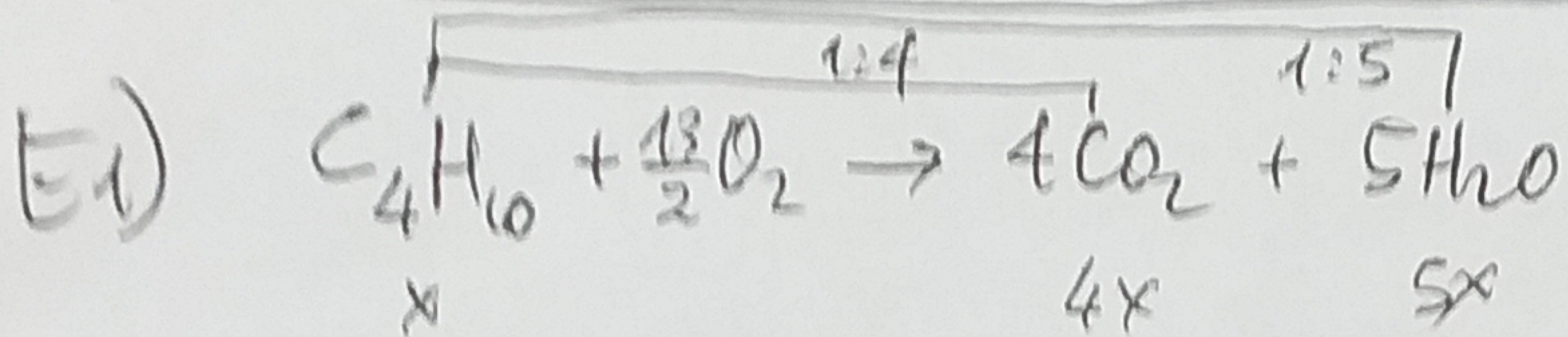
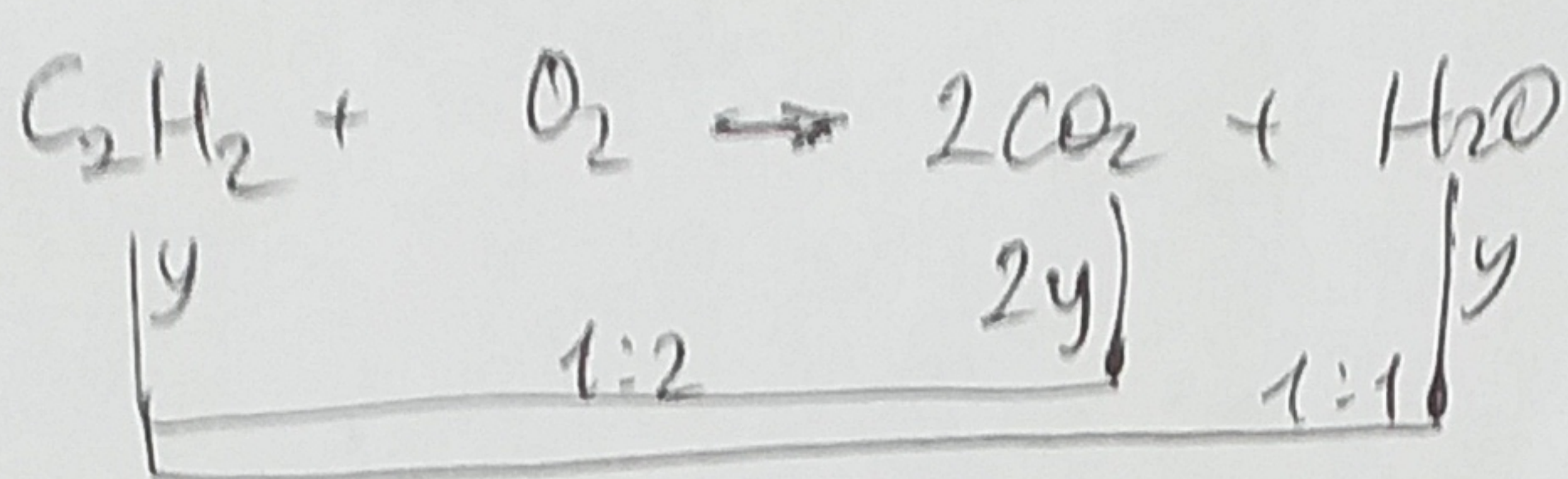


Soluzioni Esercizi Prova Chimica BAEP del 16/01/2023



pongo:
 $x = n_{\text{C}_4\text{H}_{10}} ; y = n_{\text{C}_2\text{H}_2}$

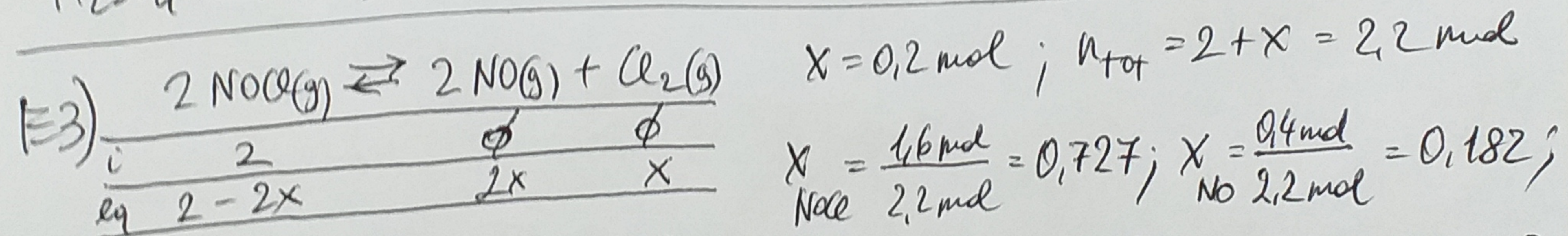
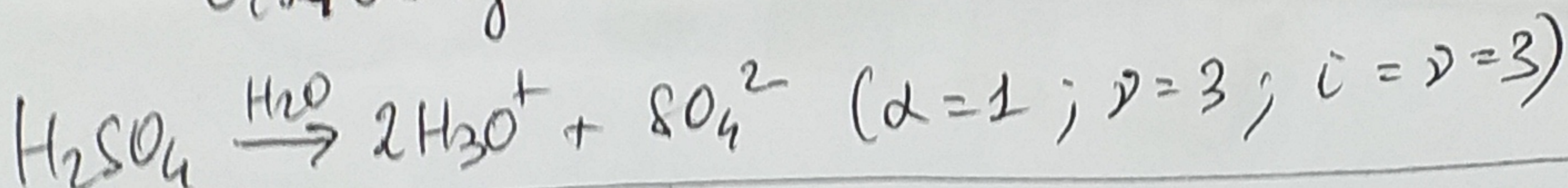


$$n_{\text{tot}} = \frac{PV}{RT} = \frac{1,50 \times 9,021}{0,0821 \times 305,15} = 0,540 \text{ mol}$$

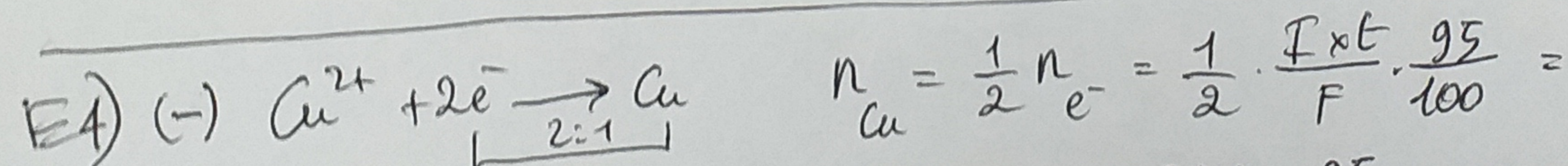
$$\begin{cases} 58,12x + 26,04y = 4 \\ 9x + 3y = 0,540 \end{cases} \quad \begin{cases} x = 0,0343 \text{ mol} = n_{\text{C}_4\text{H}_{10}} \\ y = 0,0769 \text{ mol} = n_{\text{C}_2\text{H}_2} \end{cases} \quad \begin{cases} \% \text{C}_4\text{H}_{10} = 50\% \\ \% \text{C}_2\text{H}_2 = 50\% \end{cases}$$

$$\begin{array}{l} \text{E2)} \quad 1 \text{ l} \rightarrow m_{AB} = d \cdot 10^3 \text{ ml} = 1090 \text{ g} \\ \rightarrow m_B = \frac{13}{100} \cdot 1090 = 141,7 \text{ g} \end{array} \quad \begin{array}{l} \rightarrow m_A = m_{AB} - m_B = \\ = (1090 - 141,7) \text{ g} = 948,3 \text{ g} = 0,9483 \text{ kg} \end{array}$$

$$m = \frac{141,7 \text{ g}}{98,08 \text{ g/mol}} = 1,524 \text{ mol/kg} ; t_m = 0 - K_f \cdot m \cdot 3 = -1,86 \cdot 1,524 \cdot 3 = -8,5^\circ\text{C}$$



$$x_{\text{Cl}_2} = \frac{0,2 \text{ mol}}{2,2 \text{ mol}} = 0,091 ; K_p = \frac{x_{\text{NO}}^2 \cdot x_{\text{Cl}_2}}{x_{\text{NOCl}}^2} \cdot P_{\text{tot}} = \left(\frac{0,182}{0,727} \right)^2 \cdot 0,091 \cdot 1,1 = 6,3 \cdot 10^{-3}$$



$$n_{\text{Cu}} = \frac{1}{2} \cdot \frac{108000 \cdot 3,2 \text{ A} \cdot \frac{95}{100}}{96486 \text{ C/mol}} = 0,170 \text{ mol}$$

$$m_{\text{Cu}} = n \cdot M = 0,17 \text{ mol} \times 63,55 \text{ g/mol} = 10,8 \text{ g}$$