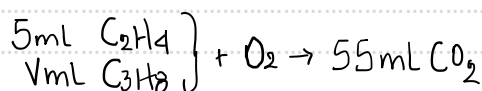
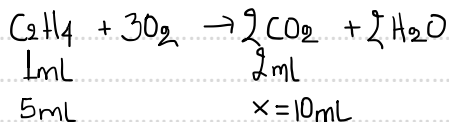


Φ.Ε.7.1.

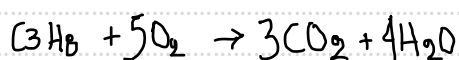


α)

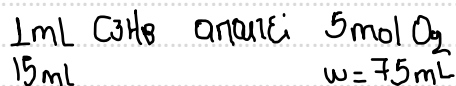
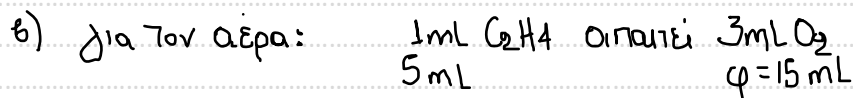


Άρα η ποσότητα των CO_2 που παράγεται από την καύση των C_3H_8 είναι :

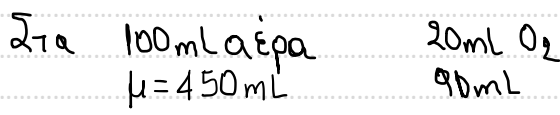
$$55 - 10 = 45 \text{ mL } \text{CO}_2$$



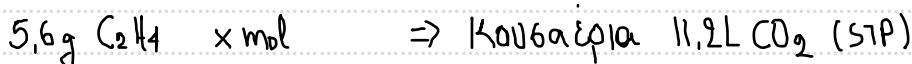
$$x = 15 \text{ mL}$$



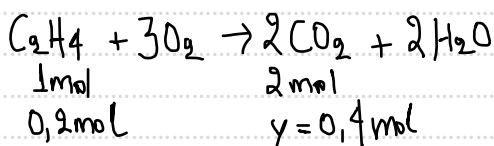
$$\text{O}_2 \Rightarrow 15 + 75 = 90 \text{ mL}$$



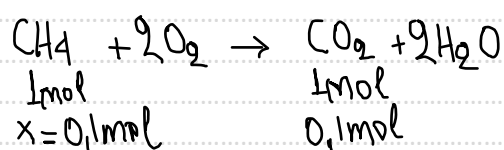
Φ.Ε.7.2



$$n_{\text{C}_2\text{H}_4} = \frac{5,6}{28} = 0,2 \text{ mol} \quad n_{\text{CO}_2} = \frac{11,2}{22,4} = 0,5 \text{ mol}$$



Άρα $0,5 - 0,4 = 0,1 \text{ mol } \text{CO}_2$ παράγονται από την καύση CH_4

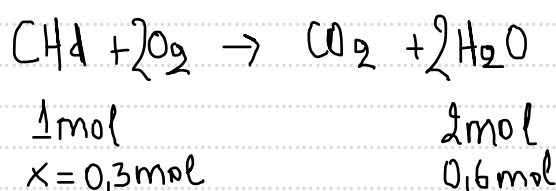


Ασκηση Φ.Ε.7.3

$$V_{\mu} = 8,96 \text{ L (STP)} \Rightarrow n_{\mu} = \frac{8,96}{22,4} = 0,4 \text{ mol} \Rightarrow n_{\text{CH}_4} + n_{\text{CO}_2} = 0,4 \text{ mol (1)}$$

$$m_{\text{H}_2\text{O}} = 10,8 \text{ g} \Rightarrow n_{\text{H}_2\text{O}} = \frac{10,8}{18} = 0,6 \text{ mol}$$

απο τα συστατικά του βιοαερίου μονο το CH_4 καίγεται :



$$\text{απο την (1)} : n_{\text{CO}_2} = 0,4 - 0,3 = 0,1 \text{ mol}$$

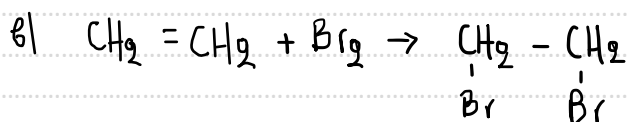
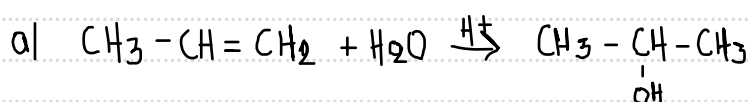
$$\text{Αρα: } V_{\text{CH}_4} = 0,3 \cdot 22,4 = 6,72 \text{ L} \quad V_{\text{CO}_2} = 0,1 \cdot 22,4 = 2,24 \text{ L}$$

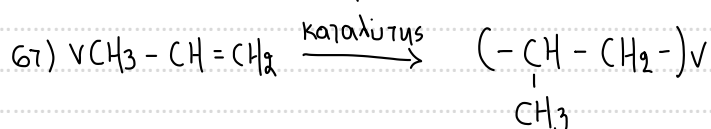
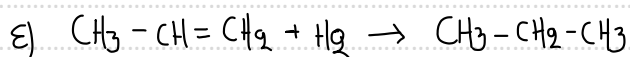
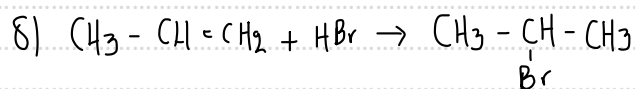
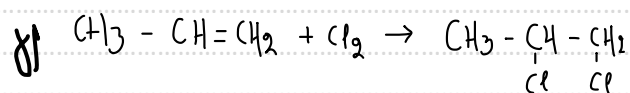
β' για τον αέρα:

$$\begin{array}{ccc} 1\text{mol CH}_4 & 2\text{mol O}_2 & \\ 0,3\text{mol} & \varphi = 0,6\text{mol} & \Rightarrow V_{\text{O}_2} = 0,6 \cdot 22,4 = 13,44 \text{ L} \end{array}$$

$$\begin{array}{ccc} \text{Στα } 100 \text{ L αέρα} & 20 \text{ L O}_2 & \\ \omega = 67,2 \text{ L} & 13,44 \text{ L} & \end{array}$$

Φ.Ε.7.4.

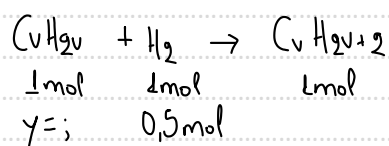




Π.Ε. 75.

21g C_vH_{2v} , C_2H_4

$$\alpha) n_{\text{H}_2} = \frac{11,2}{22,4} = 0,5 \text{ mol}$$



$$y = 0,5 \Rightarrow 0,5 = \frac{21}{M_r} \Rightarrow M_r = 42 \Rightarrow 14v = 42 \Rightarrow \underline{\underline{v = 3}}$$

X: C_3H_6

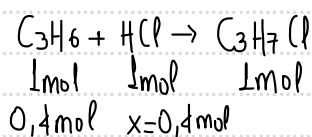
$$\beta) v = \frac{M_{r\text{νοα}}}{M_{r\text{νοβ}}} = \frac{56000}{28} = 2000 \text{ μονομερή}$$

Π.Ε. 76.

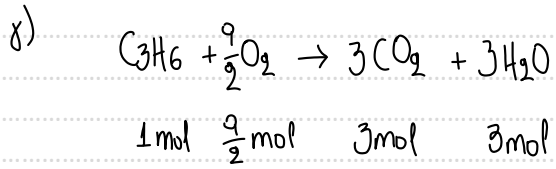
$$4,2 \text{ g } \text{C}_v\text{H}_{2v} \quad 2,24 \text{ L (STP)} \Rightarrow n = \frac{2,24}{22,4} = 0,1 \text{ mol} \Rightarrow 0,1 = \frac{4,2}{M_r} \Rightarrow M_r = 42$$

$$\alpha) \text{ άρα: } 14v = 42 \Rightarrow v = 3 \Rightarrow \text{C}_3\text{H}_6$$

β)



$$V_{\text{HCl}} = 0,4 \cdot 22,4 = 8,96 \text{ L}$$



0,5 mol x = ; y = ;

x = 1,5 mol $\Rightarrow V_{\text{CO}_2} = 1,5 \cdot 22,4 = 3,36 \text{ L}$

y = 1,5 mol $\Rightarrow m_{\text{H}_2\text{O}} = 1,5 \cdot 18 = 27 \text{ g}$

A large rectangular area with a black border, containing numerous horizontal dotted lines for writing.