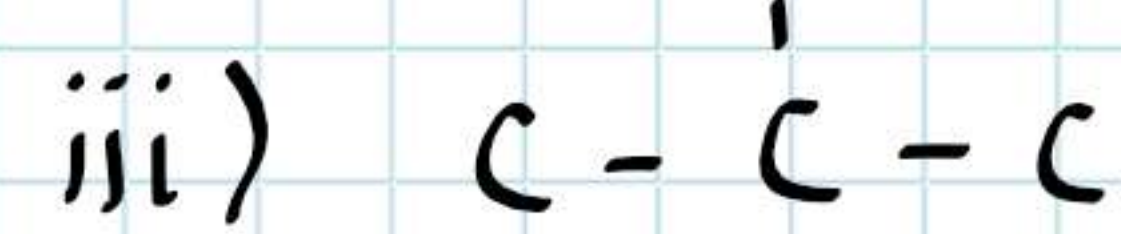
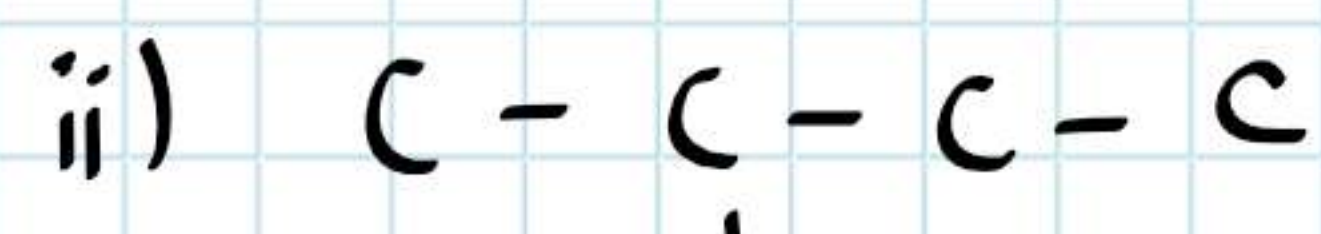
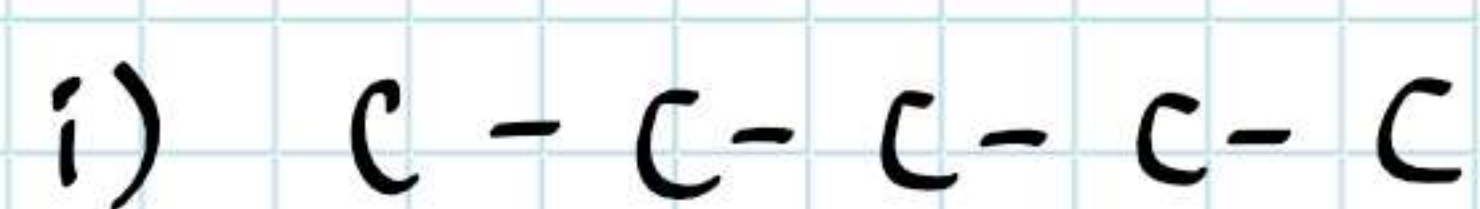
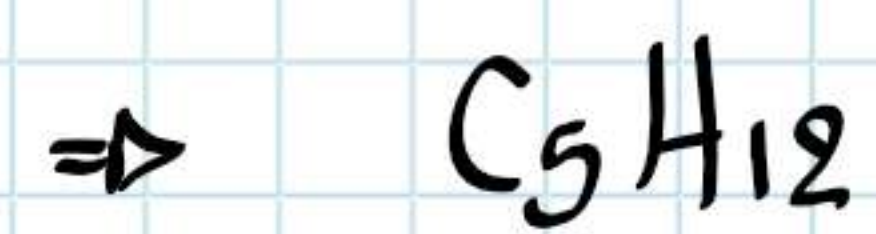


Άσκηση 1.55

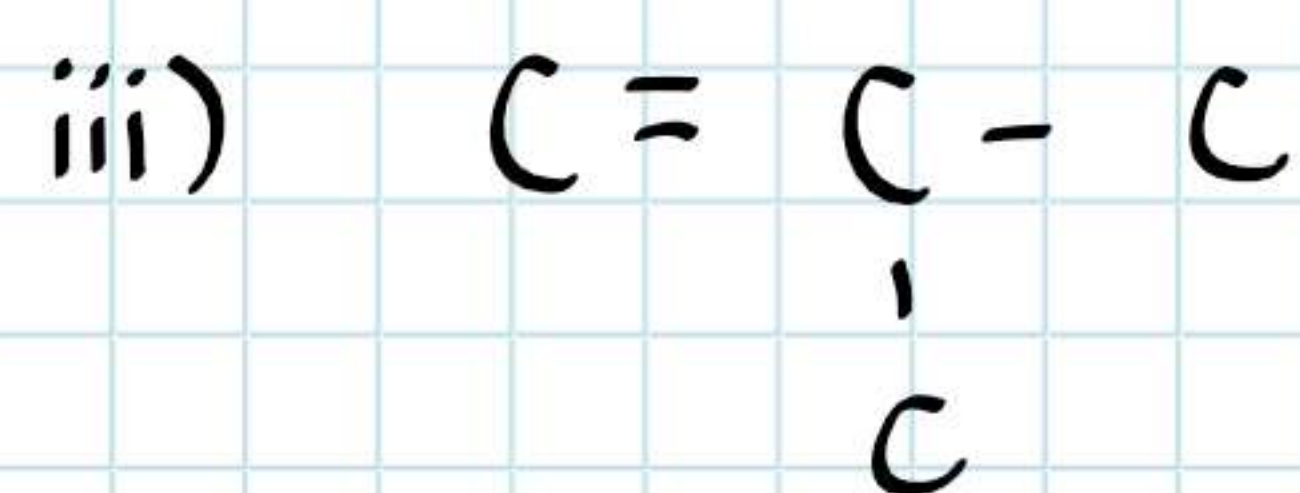
a) C_nH_{2n+2} $M_r=72 \Rightarrow 12n + 2n + 2 = 72 \Rightarrow 14n = 70 \Rightarrow \underline{n=5}$



β)

$\eta = \frac{V}{22,4} = \frac{4,48}{22,4} = 0,2 \text{ mol}$ $\eta = \frac{m}{M_r} \Rightarrow 0,2 = \frac{11,2}{M_r} \Rightarrow M_r = \frac{11,2}{0,2} = 56$

οπότε: C_nH_{2n} $\Rightarrow 12n + 2n = 56 \Rightarrow 14n = 56 \Rightarrow n=4$



Άσκηση 1.56

a) $C_nH_{2n+1}OH$ 21,62% w/w O Ar: C=12 H=1 O=16

$M_r = 12n + (2n+1) \cdot 1 + \underbrace{16 \cdot 1}_{\text{OH}} + 1 \cdot 1 = (14n + 18)g$

Δια 100g αλκοόλης περιέχονται 21,62g οξυγόνου

$(14n + 18)g$

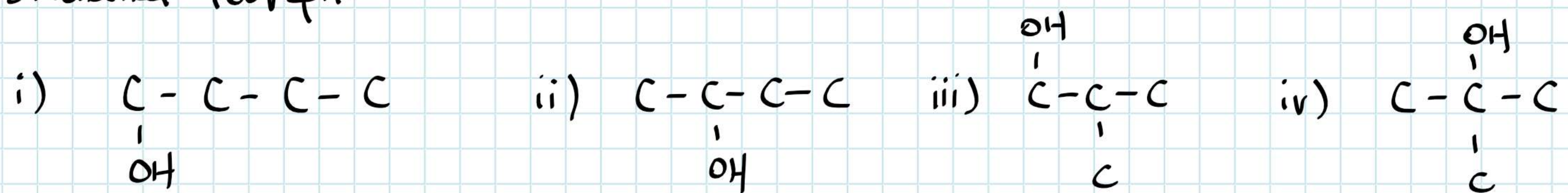
- " -

16g οξυγόνου

$100 \cdot 16 = 21,62 \cdot (14n + 18) \Rightarrow 1600 = 302,68n + 389,16$

$\Rightarrow 1600 - 389,16 = 302,68n \Rightarrow n \approx 4$ C_4H_9OH

δυντακτικά Ισομερή:



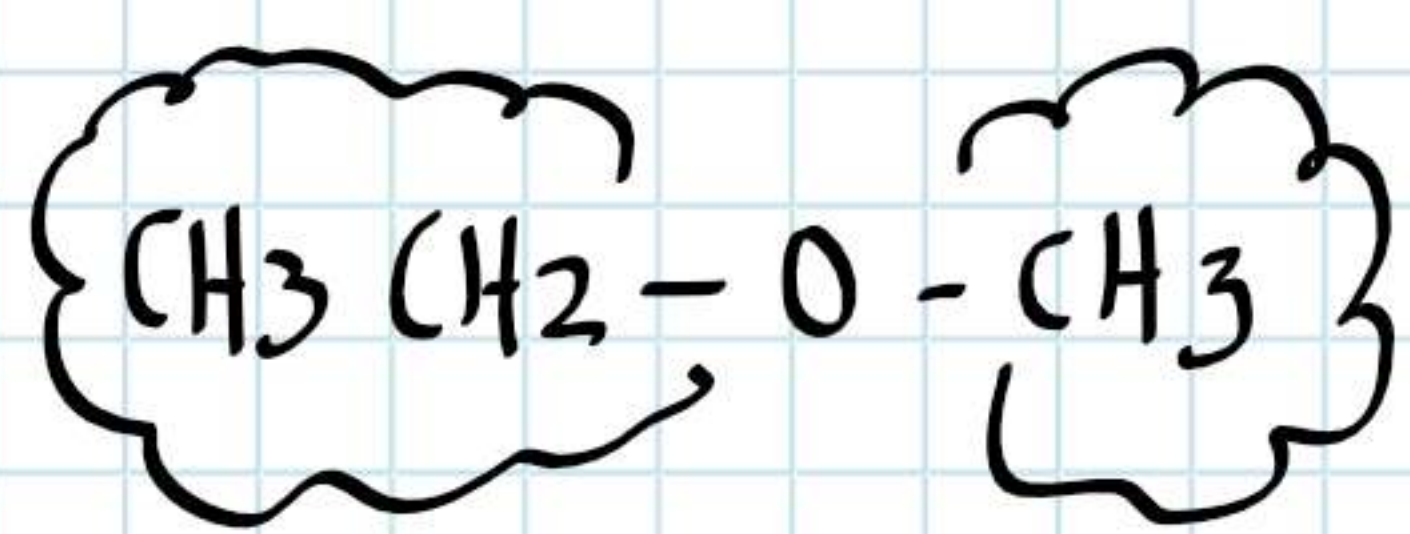
β) $\text{C}_n\text{H}_{2n-2}$ $M_r = 12n - 2n - 2 = 10n - 2$

Στα $(10n - 2)\text{g}$ ένωσης έχουμε $(2n - 2)\text{g}$ H

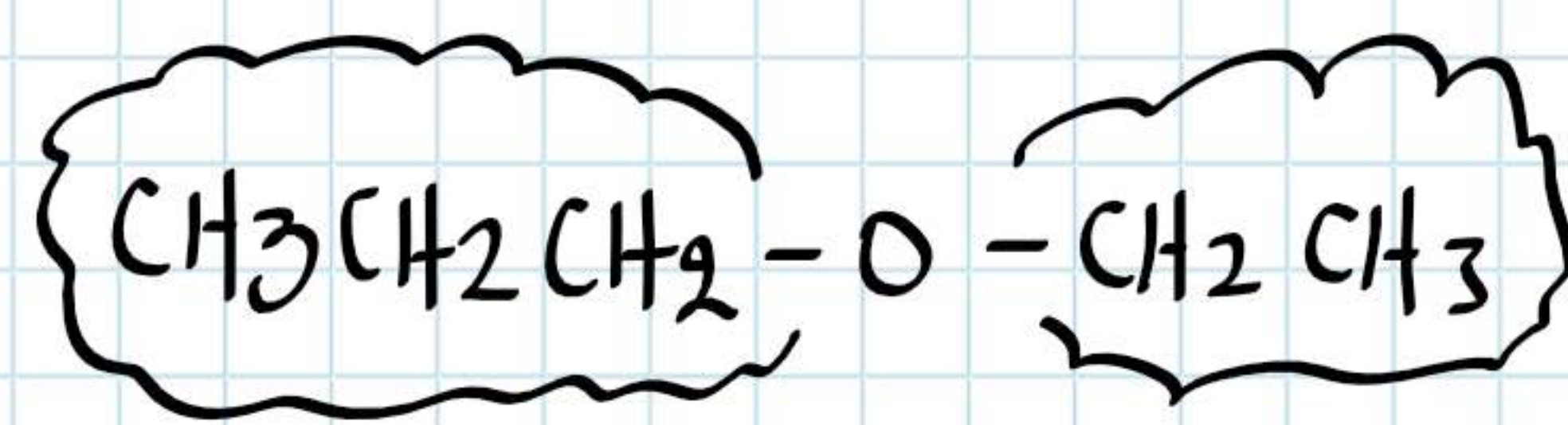
100g ένωσης 10g H

$$(10n - 2) \cdot 10 = (2n - 2) \cdot 100 \Rightarrow n = 3 \Rightarrow \text{CH}_3 - \text{C} \equiv \text{CH}$$

R-O-R:

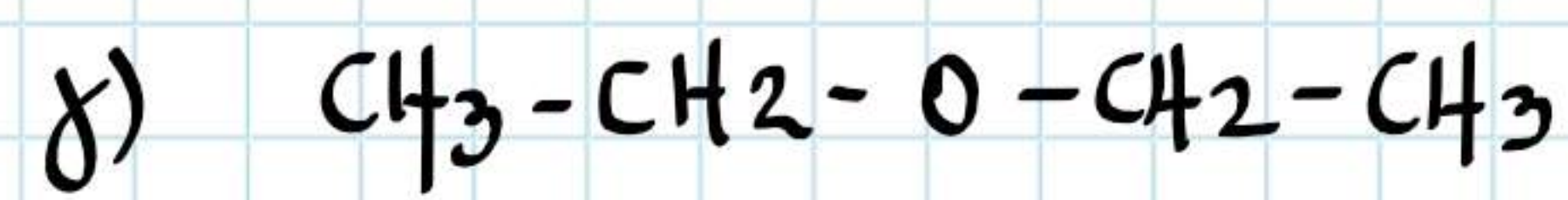
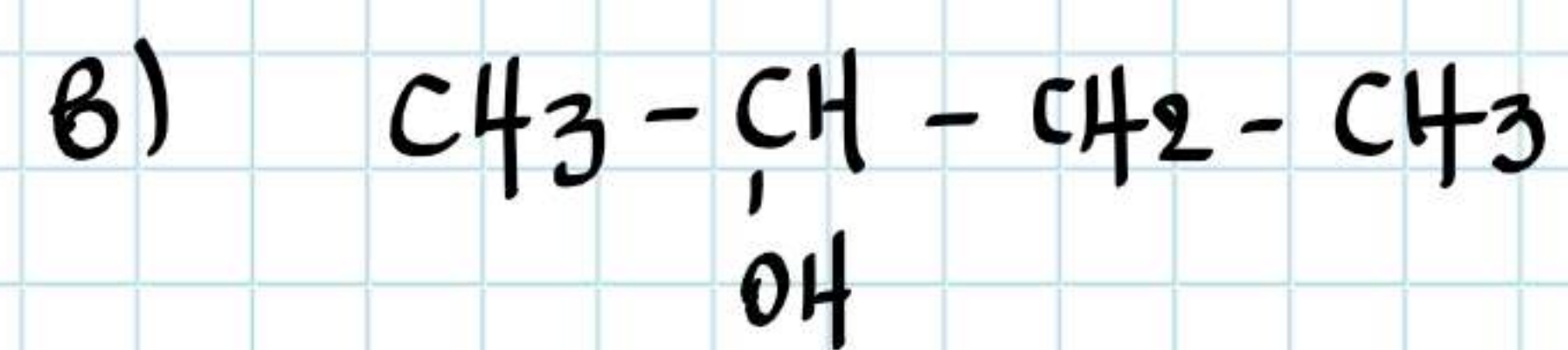
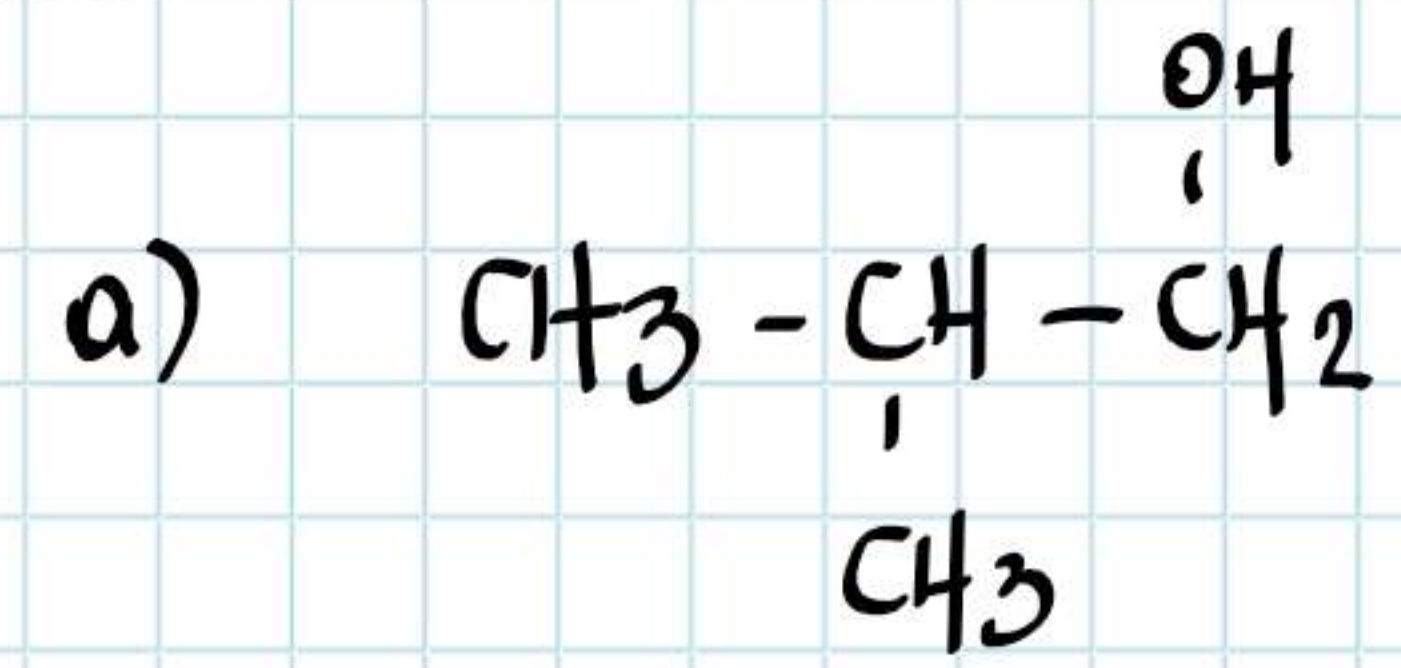


αιθυλο μεθυλο αιθέρας



αιθυλο προπυλο αιθέρας

1.57

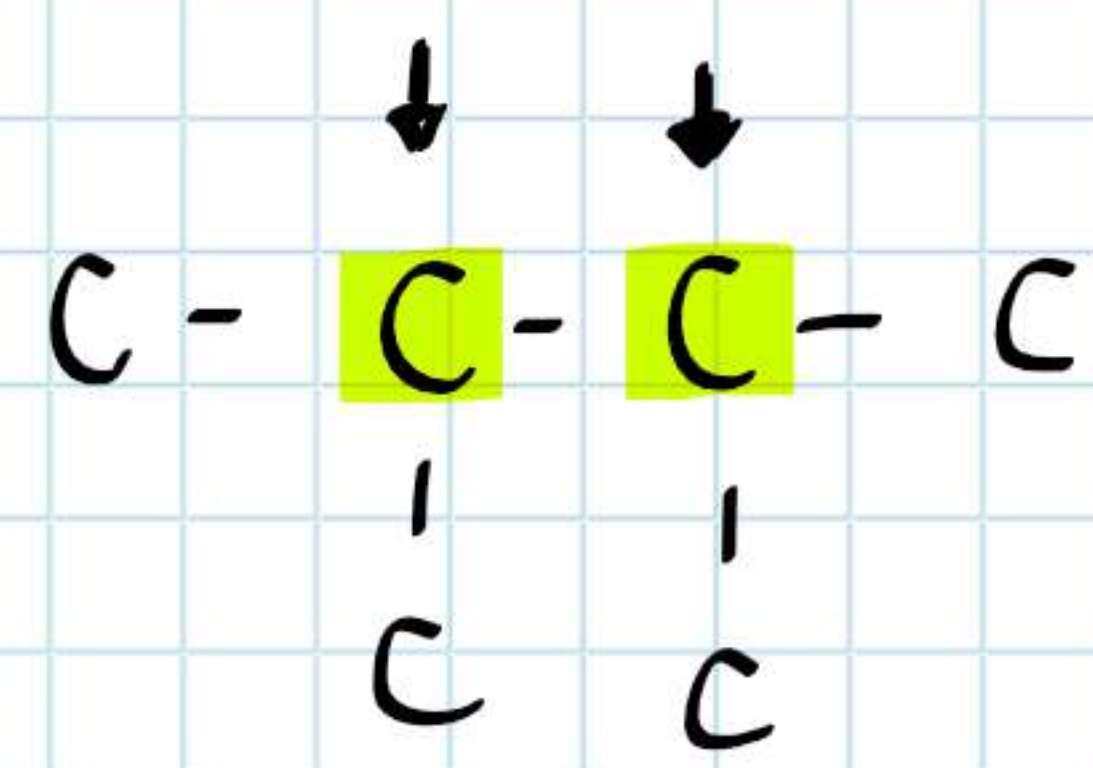


1.58

a) ζωστό

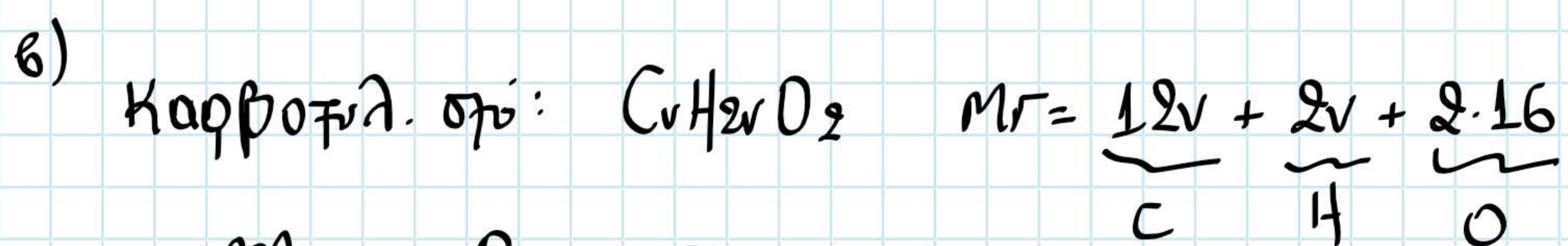
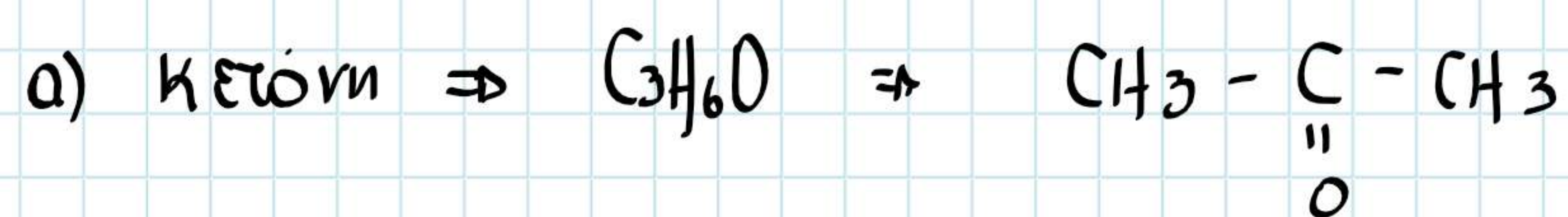
β) λάθος

γ) ζωστό



Τριτοταγής είναι ένας C
ο οποίος ενώνεται με 3C

1.59



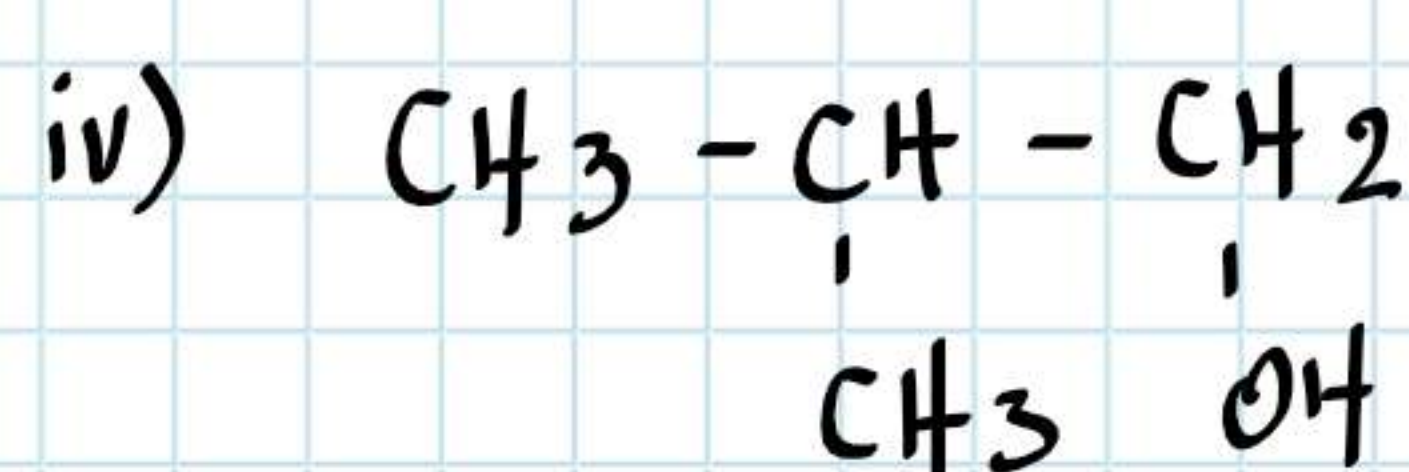
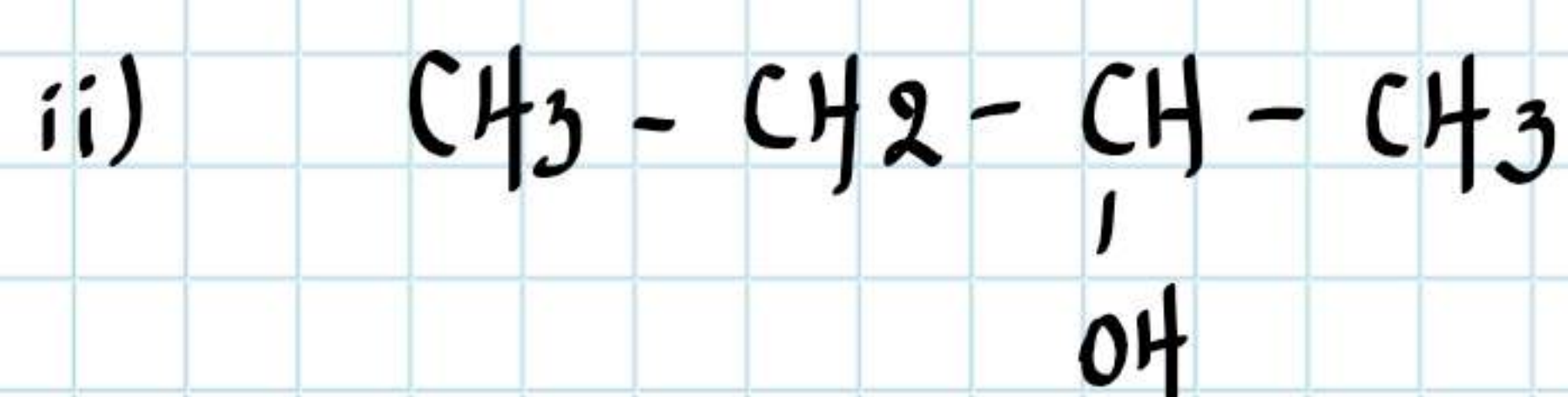
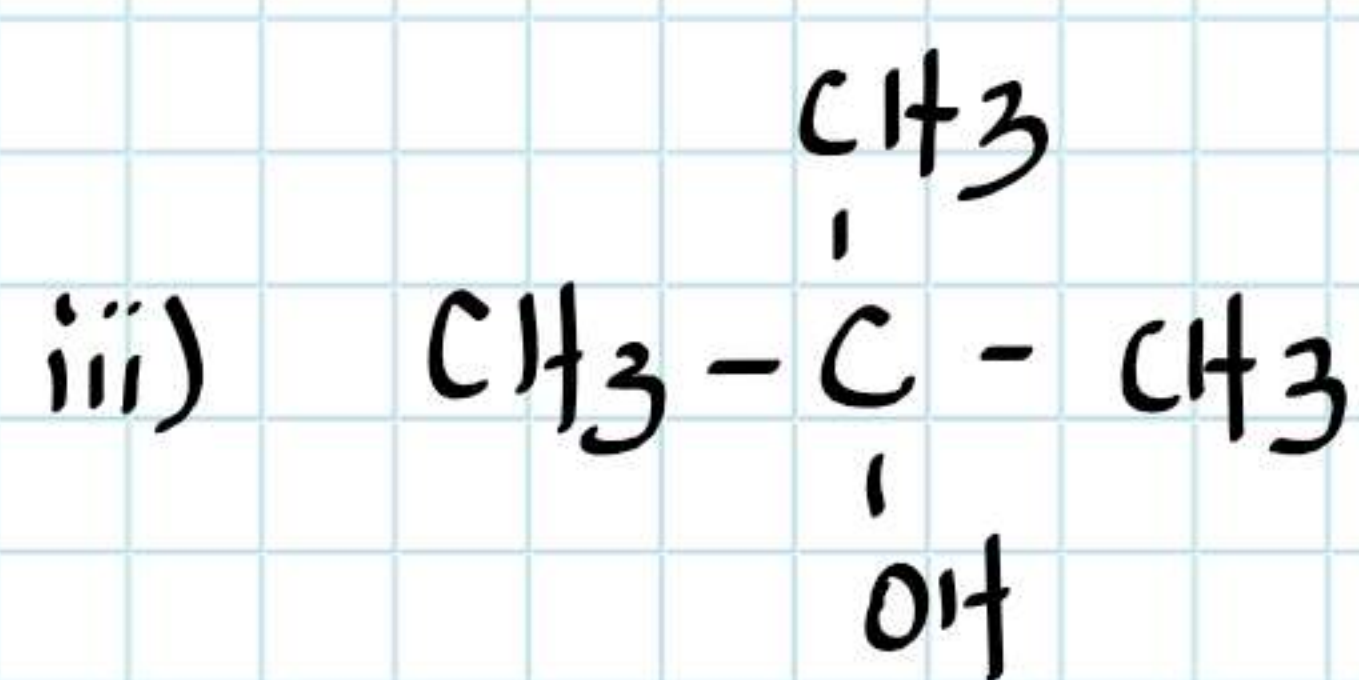
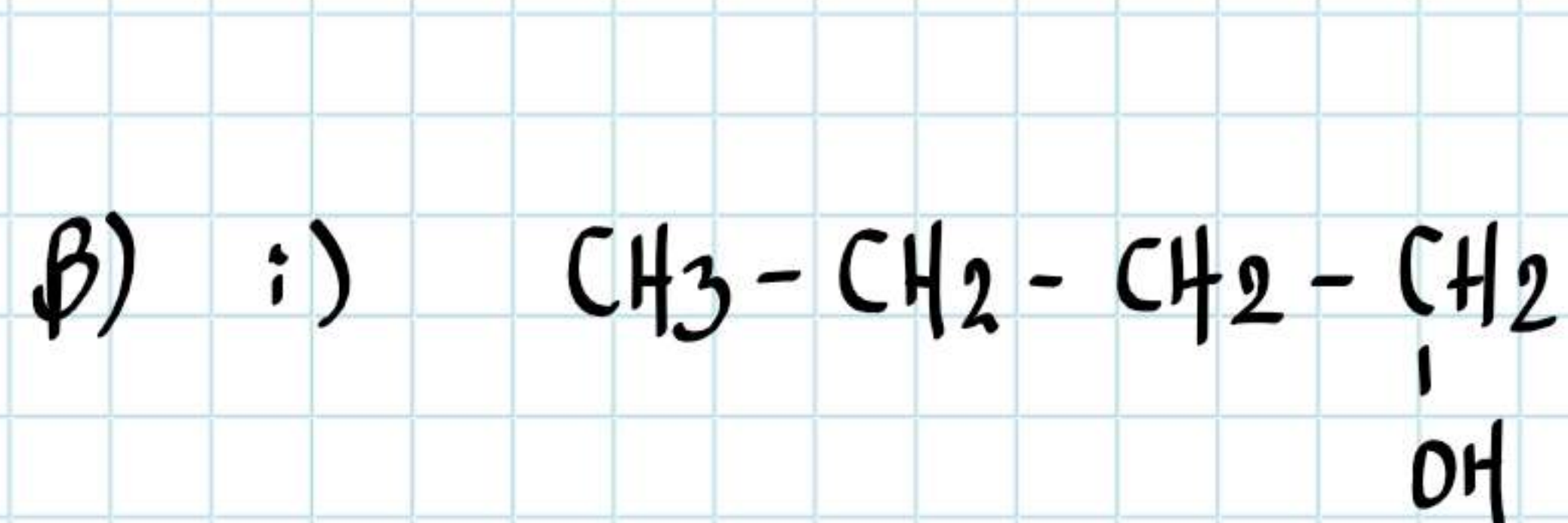
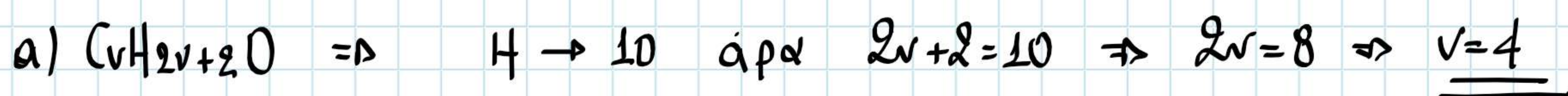
$$\frac{m_{\text{O}}}{m_{\text{H}}} = \frac{8}{1}$$

$$\frac{m_{\text{O}}}{m_{\text{H}}} = \frac{2 \cdot 16}{2v}$$

$$\left. \begin{array}{l} \frac{m_{\text{O}}}{m_{\text{H}}} = \frac{8}{1} \\ \frac{m_{\text{O}}}{m_{\text{H}}} = \frac{2 \cdot 16}{2v} \end{array} \right\} \Rightarrow \frac{8}{1} = \frac{32}{2v} \Rightarrow 16v = 32 \Rightarrow \boxed{v=2}$$



1.60



γ) Ισομέρεια θέσης: i - ii

Ισομέρεια αλυσίδας: i - iv