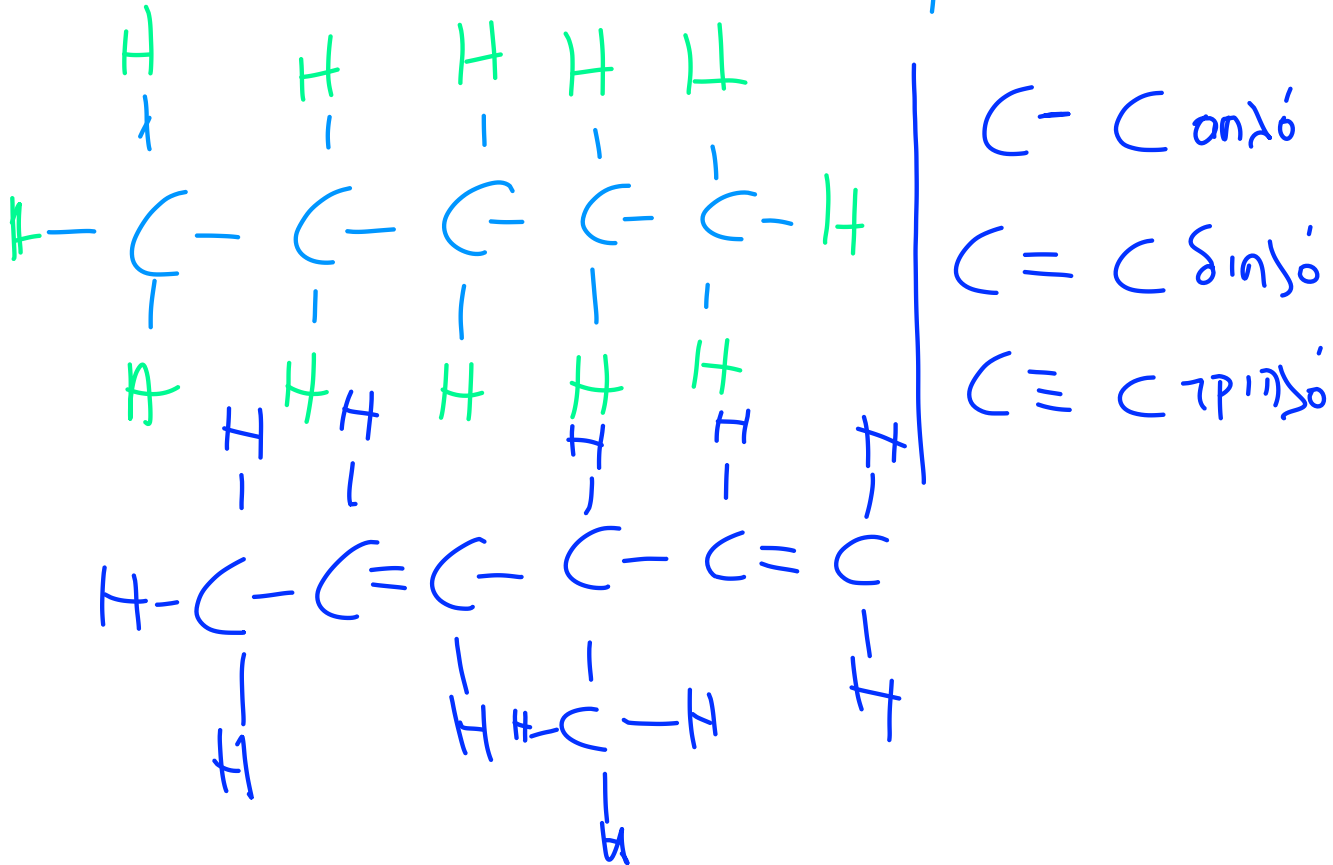


ΟΡΓΑΝΙΚΗ ΧΗΜΕΙΑ



18.000.000

4 δεσμούς

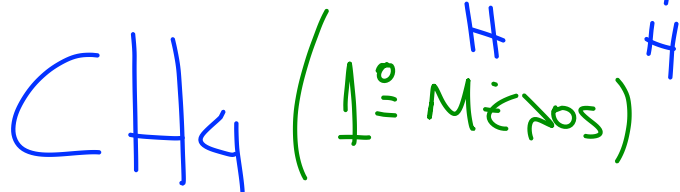
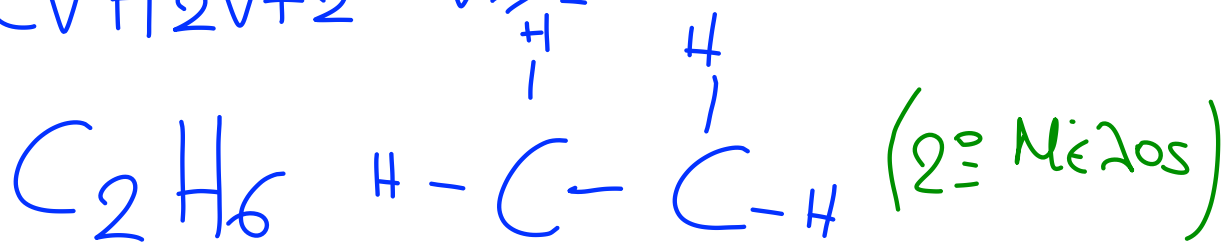
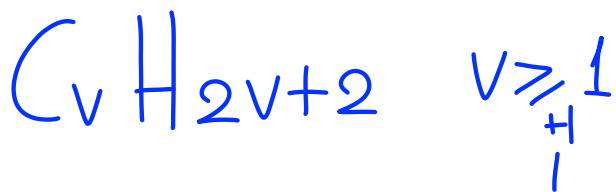


Ομόλογες ομάδες → Ομάδες οργανικών

ένωσης π.ε
παρόμοιες χημικές
και φυσικές ιδιότητες

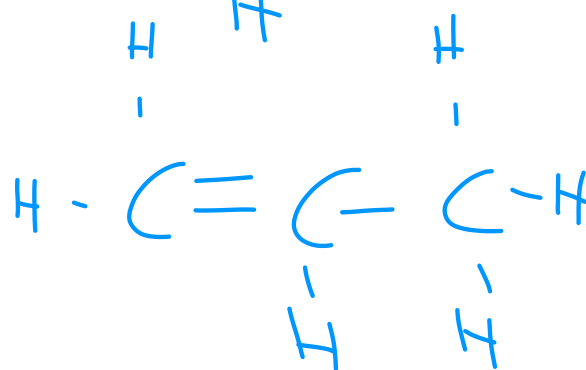
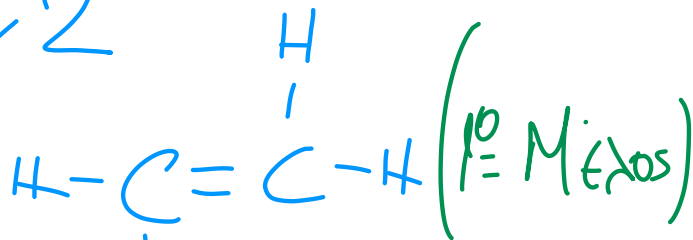
ΑΛΚΑΝΙΑ

→ περιέχουν μόνο
απλούς δεσμούς

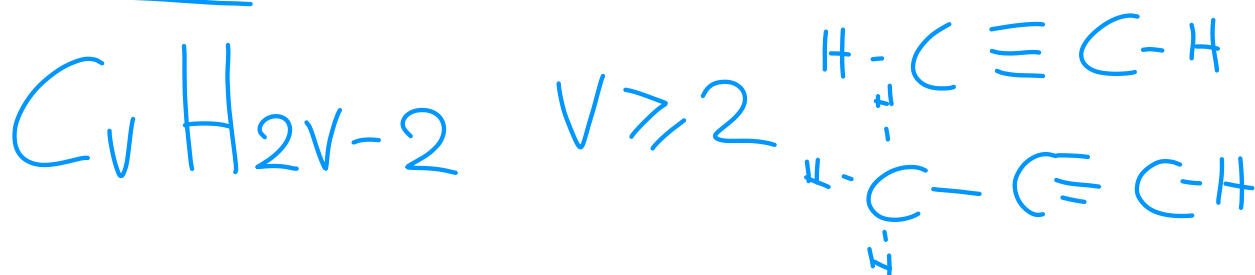


ΑΛΚΕΝΙΑ

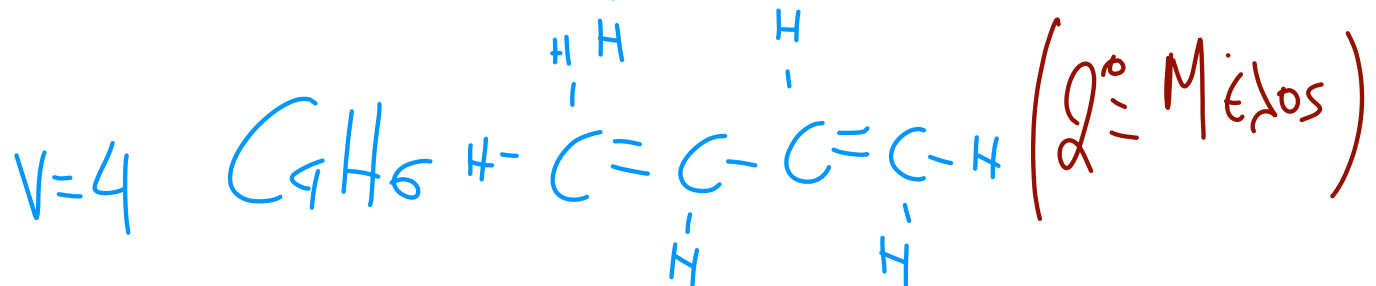
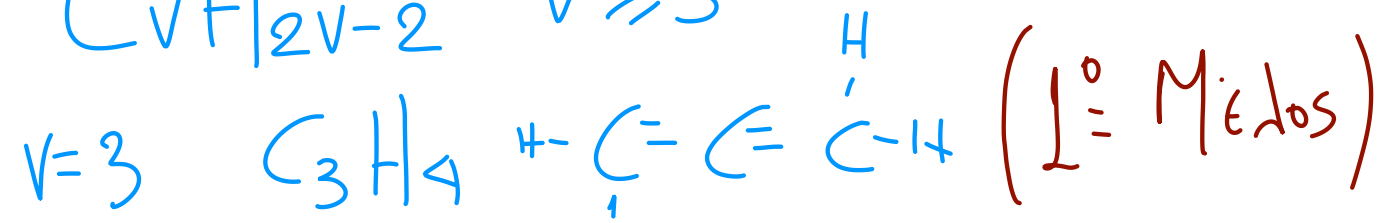
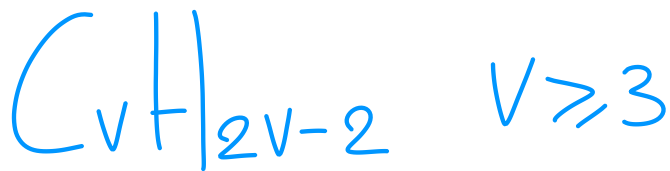
→ 1 διπλό δεσμό



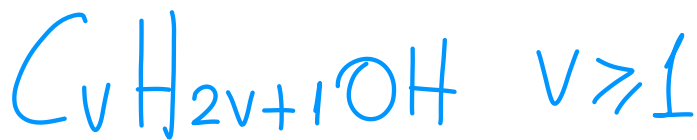
ΑΛΚΙΝΙΑ → 1 τριπλό δεσμό



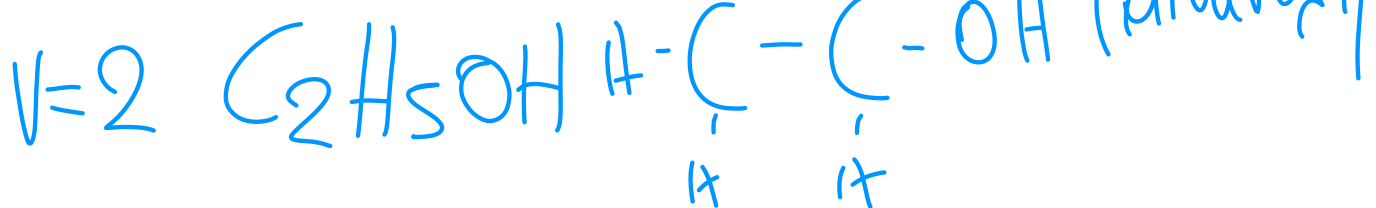
ΑΛΚΑΔΙΕΝΙΑ → 2 Συναρτη δέσμοι



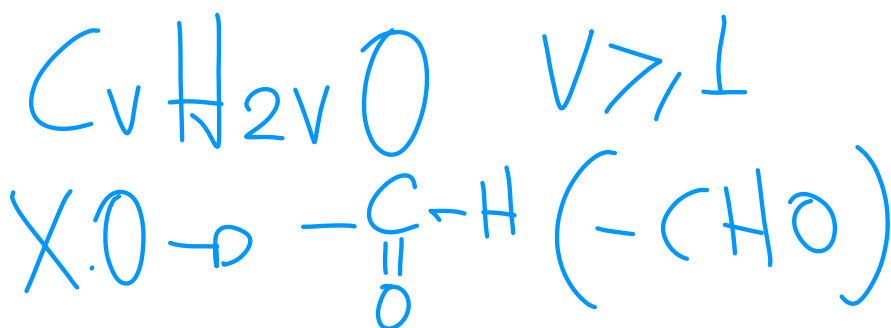
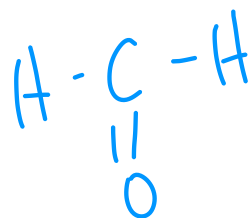
ΑΛΚΟΟΛΕΣ

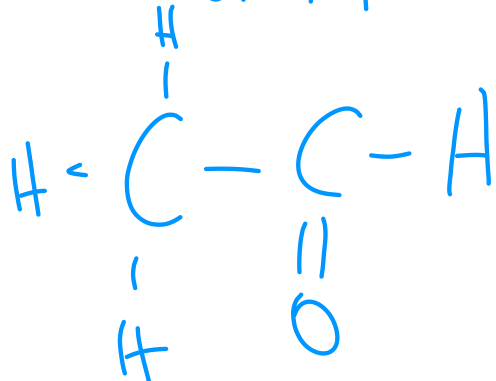


Χαρακτηριστική ομάδα (X.O.) = -OH



ΑΛΔΕΥΔΕΣ

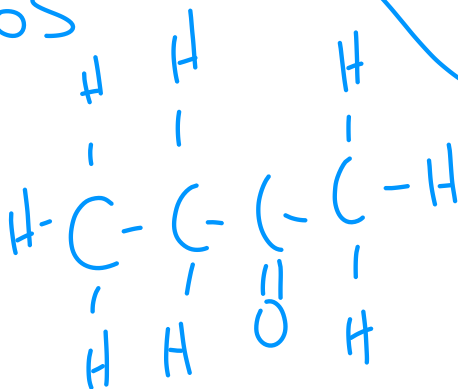
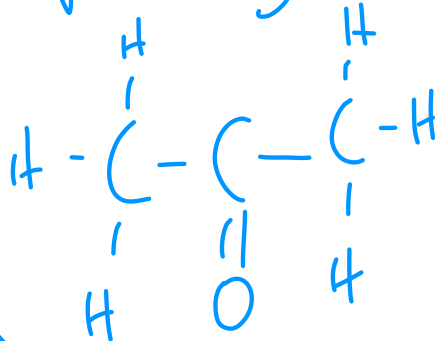
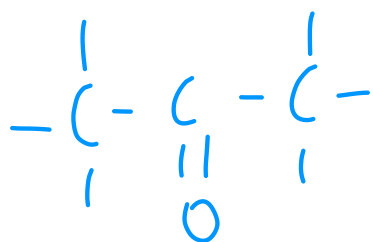


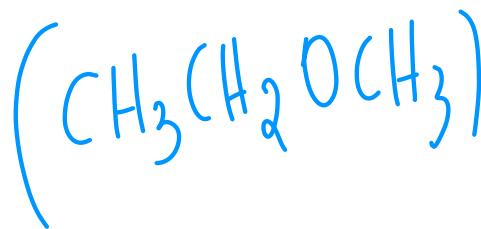
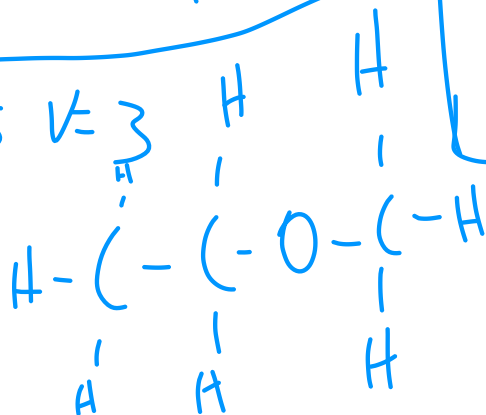
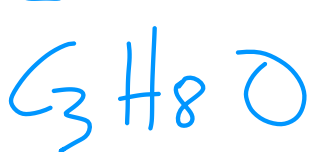
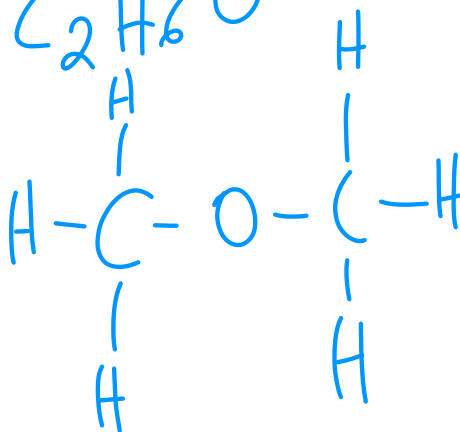
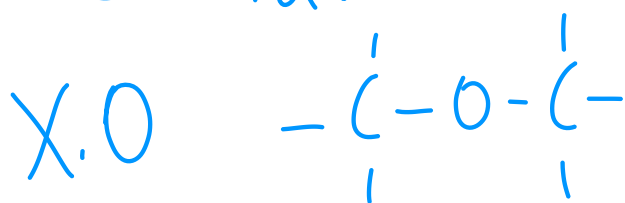
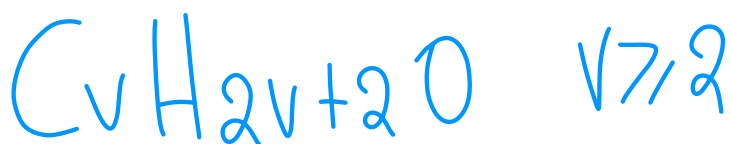
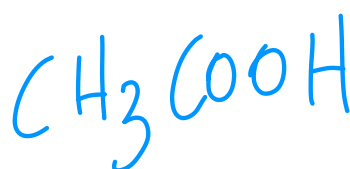
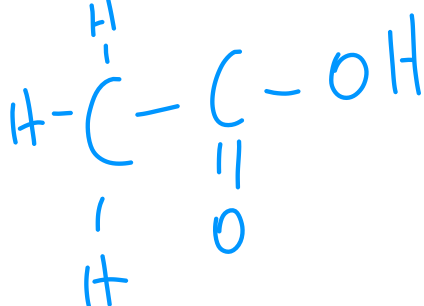
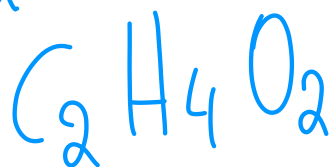
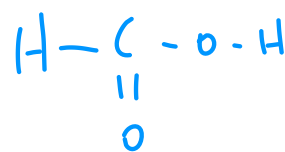
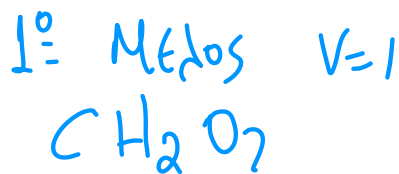
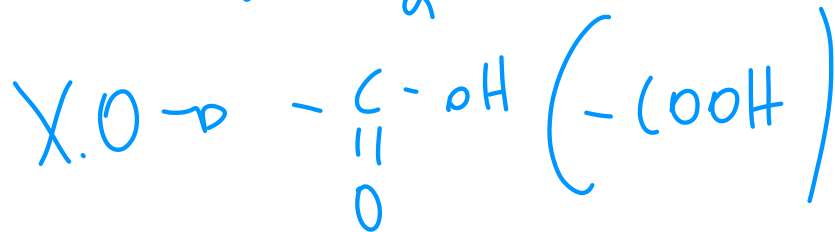
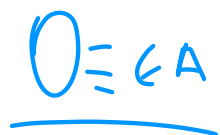


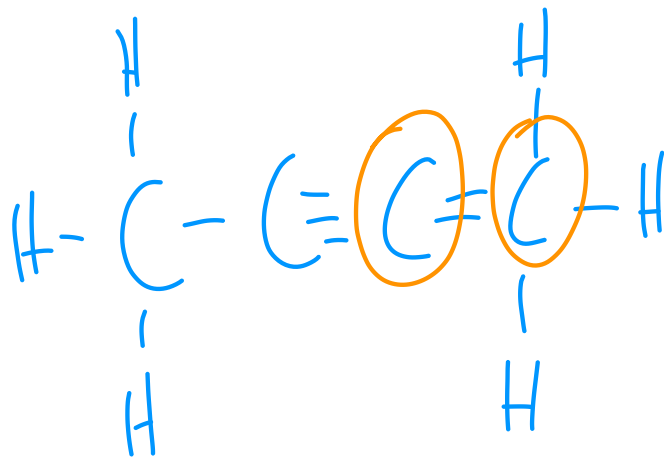
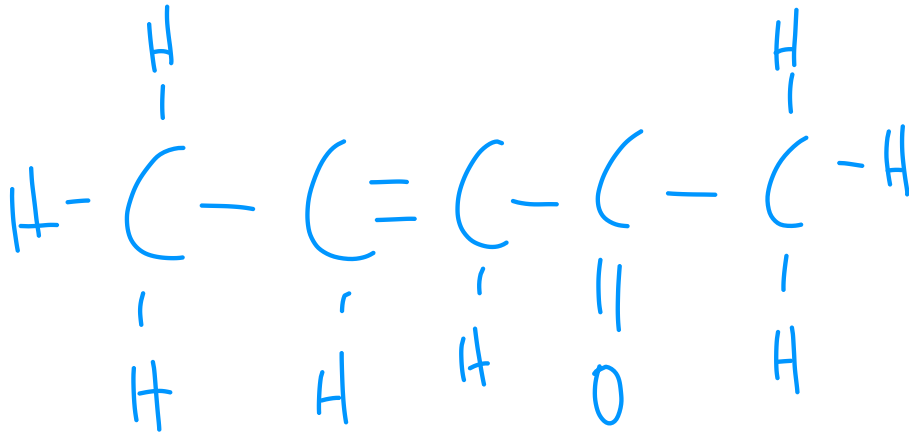
Ketones



X.O.

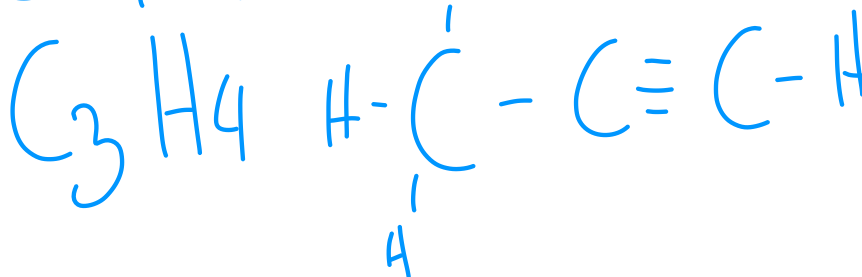
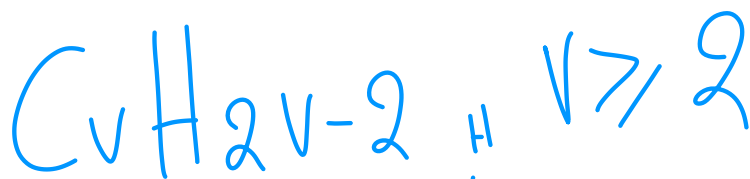




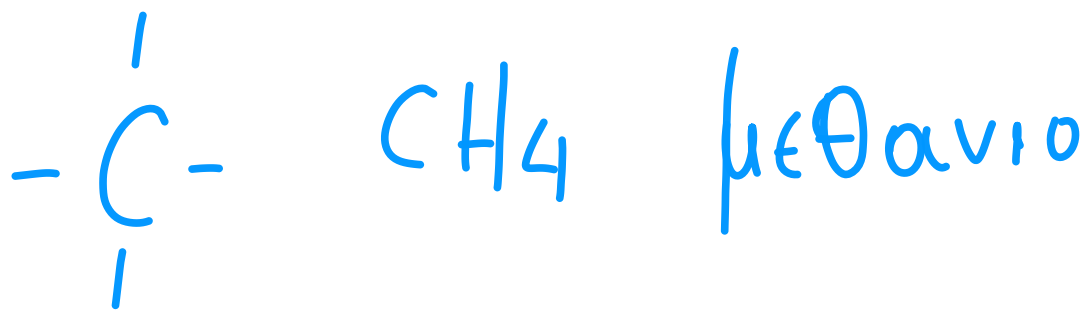


Γ.Μ.Τ. αλκυμιν

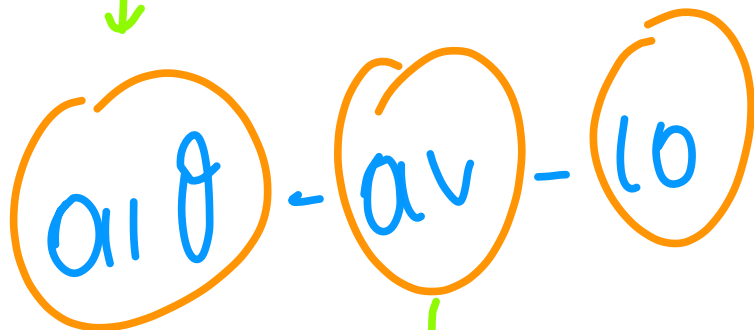
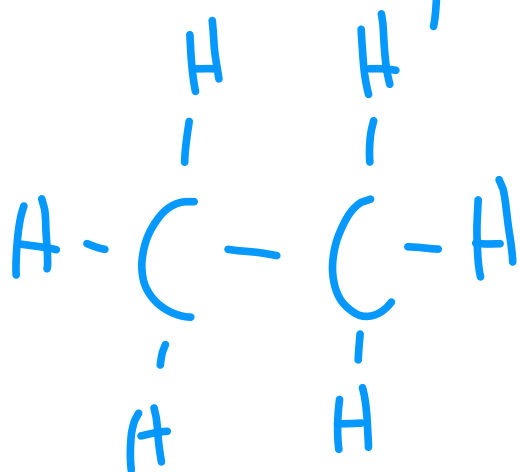
2⁰ Μίτος



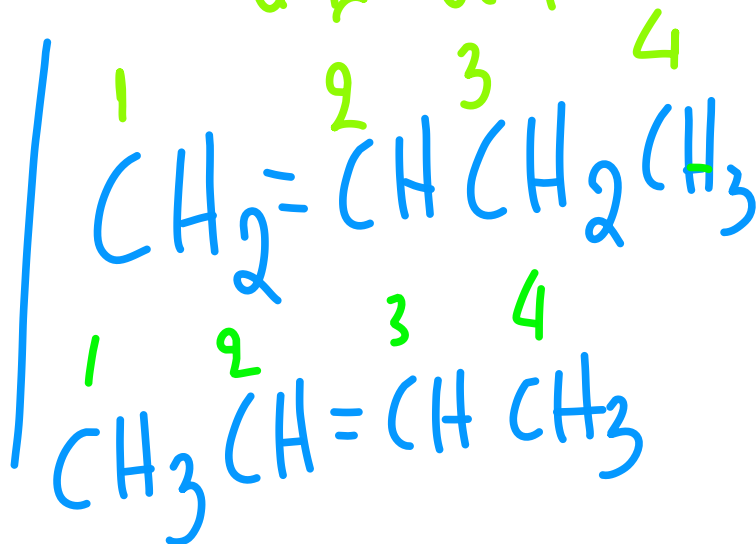
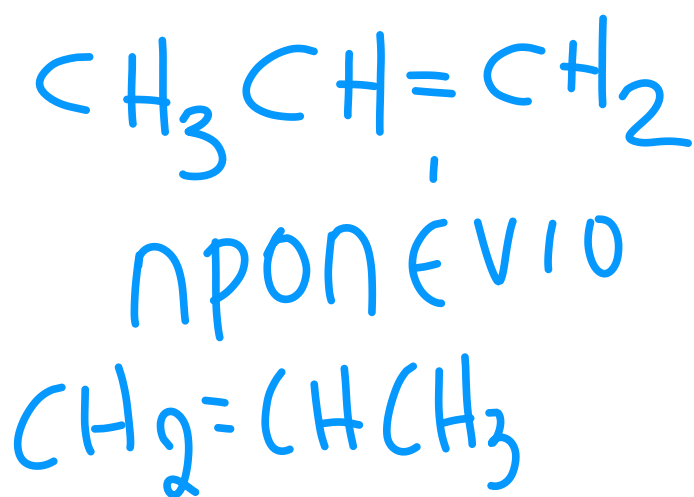
ΟΝΟΜΑΤΟΛΟΓΙΑ

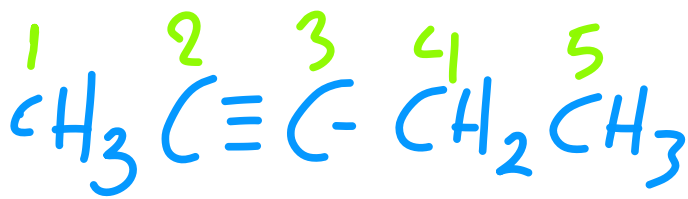


1 C → μεθ	αηλούς δεξίαν - αν	H C - 10
2 C → αιθ	1 8. 8	- C - H - αλη
3 C → η προη	- εν -	O
4 C → βουτ	1 7. 8	- C - C - ουν
5 C → πεντ		O
		- (οοη - ικιοζι)



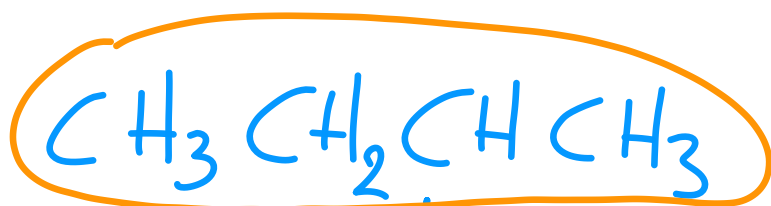
αηλούς δεξίαν



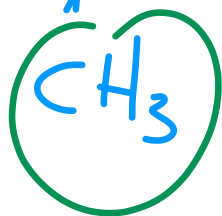


2 πεντίνιο

ΕΝΟΣΗΣ ΜΕ ΔΙΑΚΛΑΔΟΣΗΣ

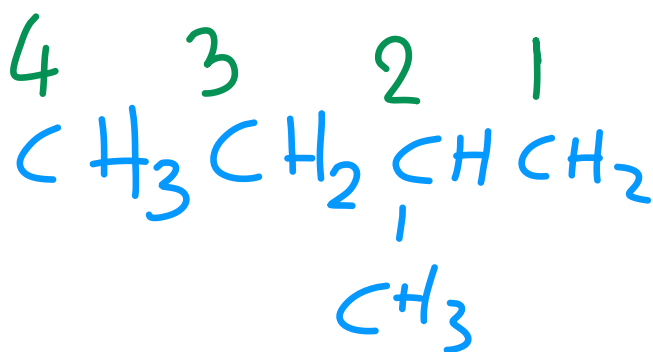


→ κύρια ανθρακική αλυσίδα



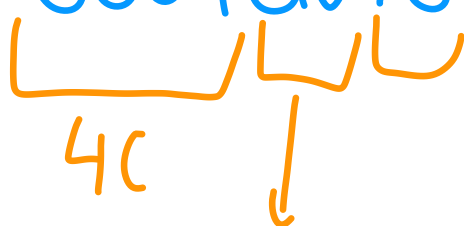
→ διακλάδωση

- CH_3 μέθυλο
- CH_2CH_3 αιθύλο
- $\text{CH}_2\text{CH}_2\text{CH}_3$ προπυλο

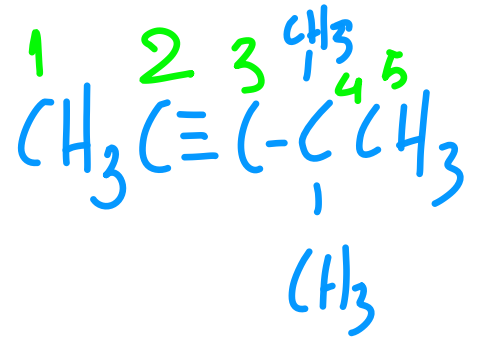
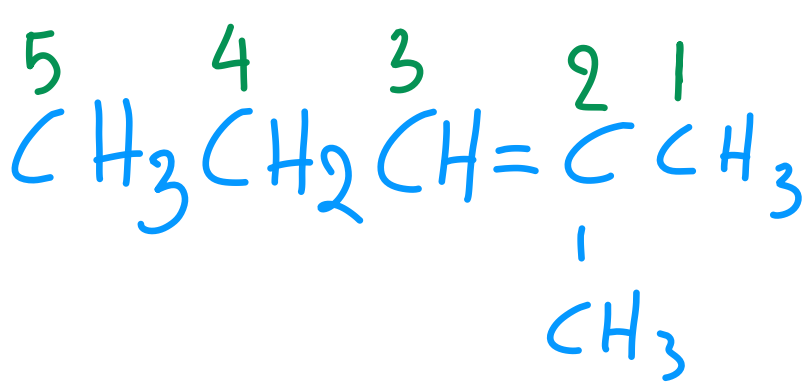


2 μέθυλο βουτανιο

→ υδρογονανθράκας



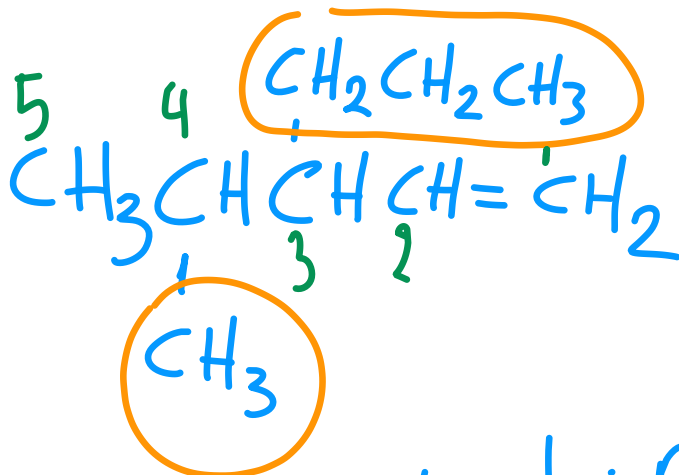
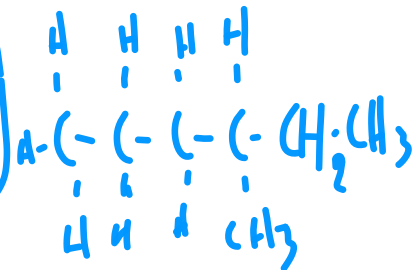
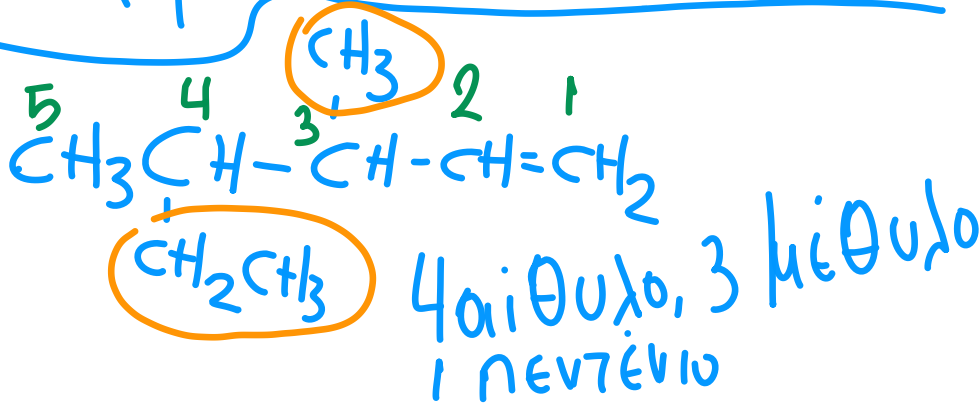
αηλούς
δέξις



2 μεθυλο 2 πεντένιο

4,4 διμεθυλο

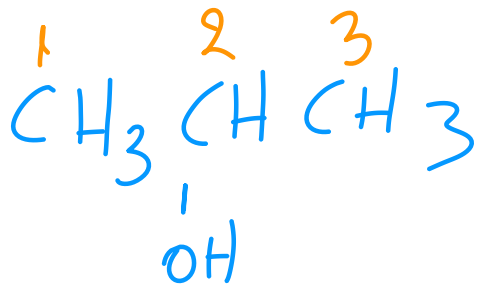
2 πεντένιο



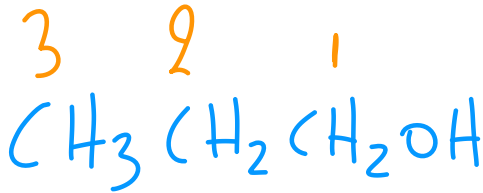
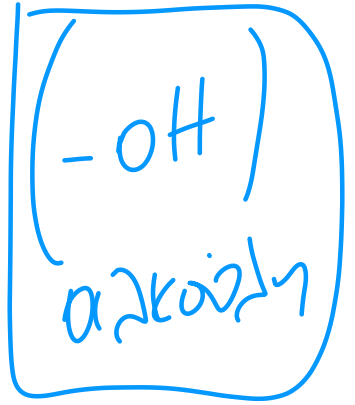
3 μεθυλο εξάνιο

4 μεθυλο, 3 προπυλο
1 πεντένιο

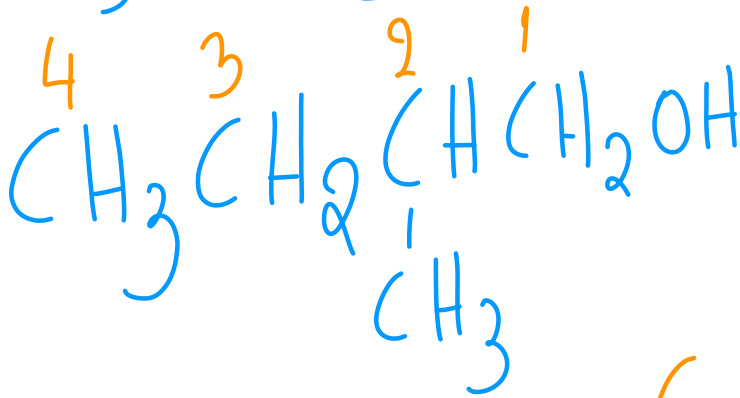
ΟΝΟΜΑΤΟΛΟΓΙΑ ΕΝΩΣΕΩΝ ΜΕ ΧΑΡΑΚΤΗΡΙΣΤΙΚΕΣ ΟΜΑΔΕΣ



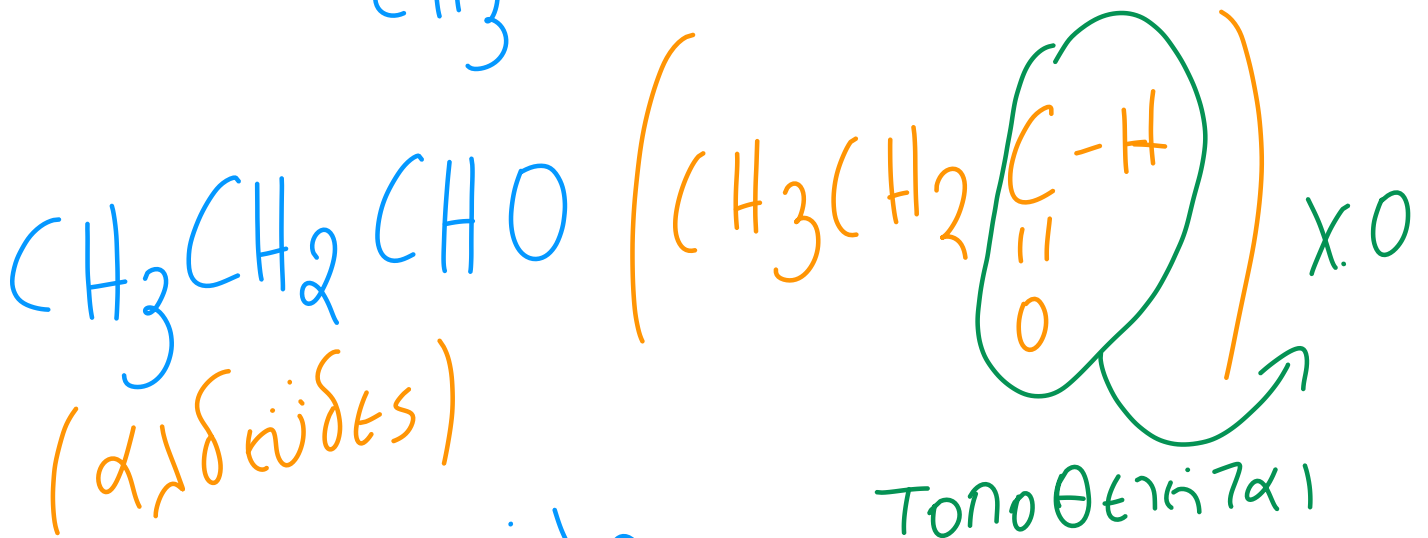
2 προπανόλη



1 προπανόλη



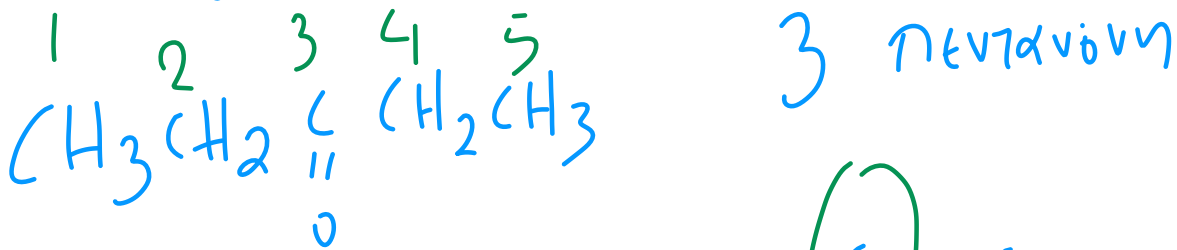
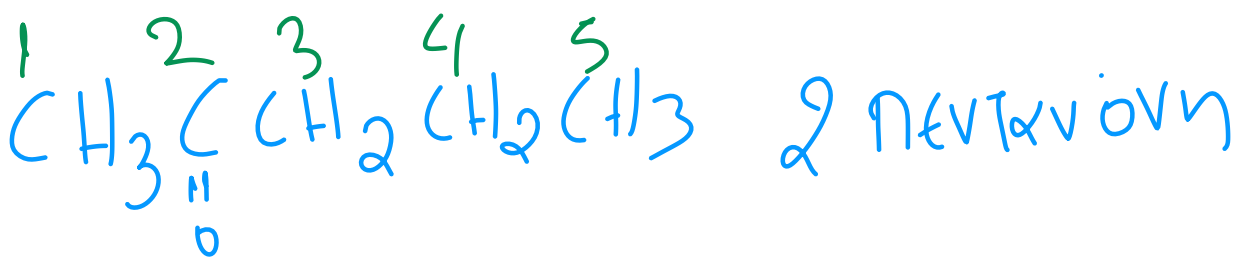
2 μεθυλο
1 βουτανόλη



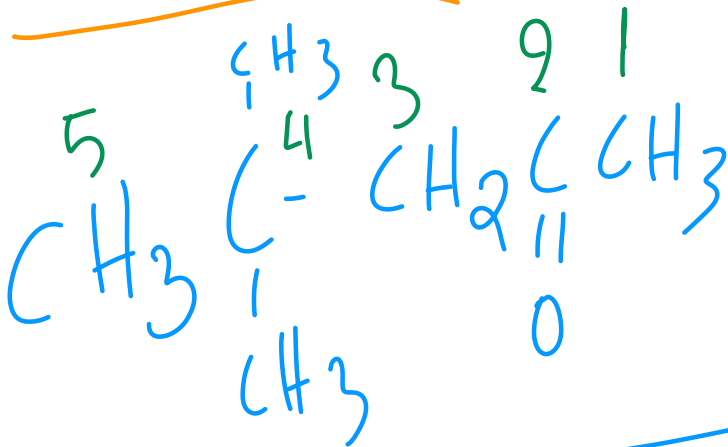
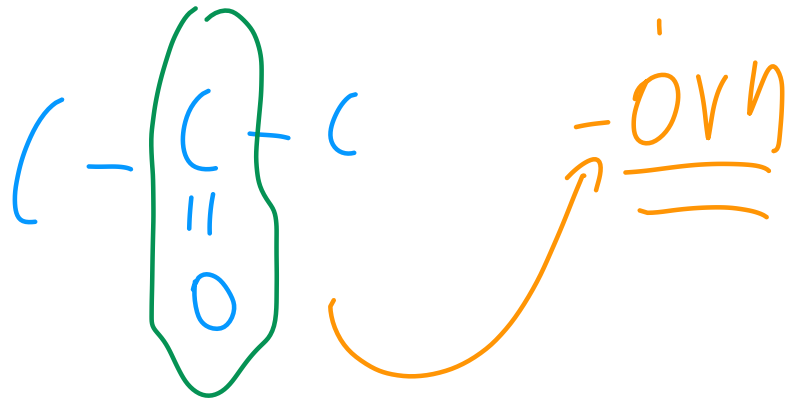
(αλδένες)

προπανάλη

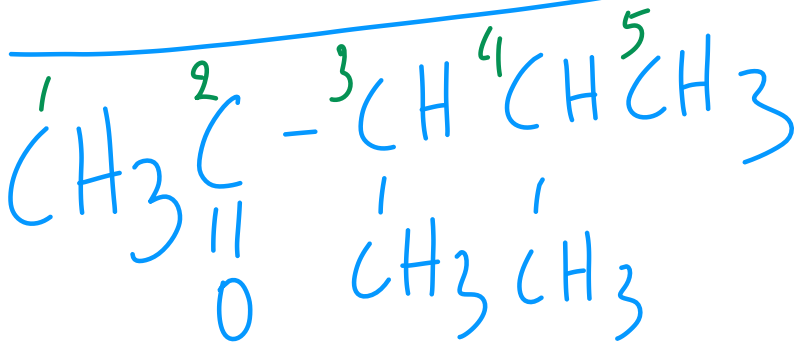
Τοποθετείται
πάντα στο πρώτο C
από δεξιά προς τα
αριστερά



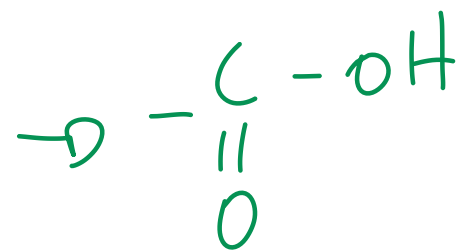
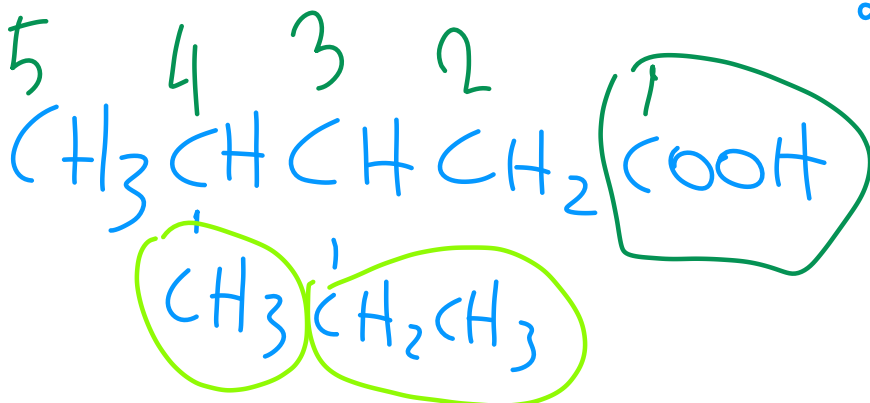
KETONE



→ 4,4 διμεθυλο
2 πεντανόνη



3,4 διμεθυλο
2 πεντανόνη



καρβοξυλικά οξέα

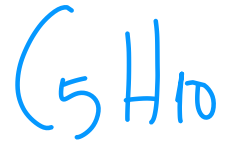
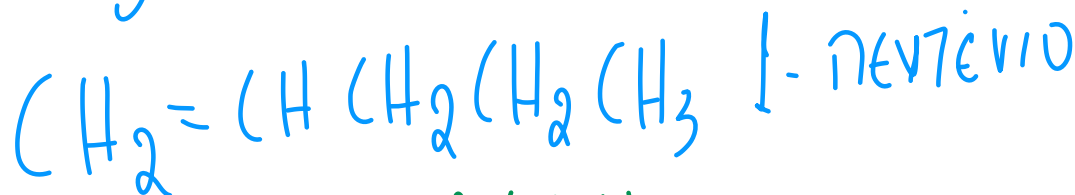
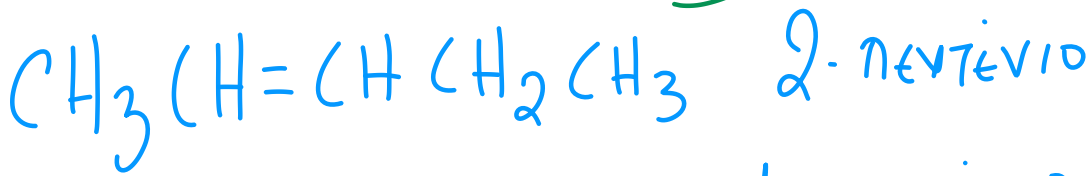
3 αιθέρια, 4 μέθυλο
πεντανοϊκό οξύ

ΙΣΟΜΕΡΙΑ



Σ.Τ

Μ.Τ



ΙΣΟΜΕΡΗ

ΙΣΟΜΕΡΗ

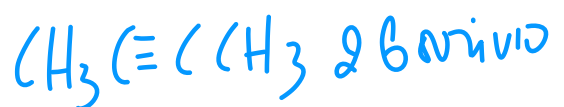
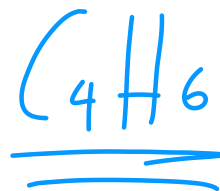
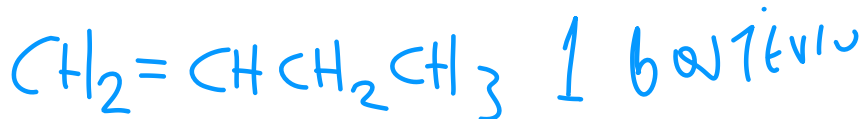
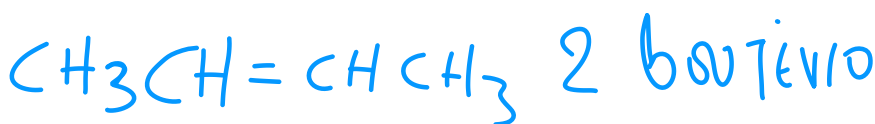
ΘΕΣΗΣ

→ Διαφορετική θέση ο
πολλαπλός δεσμός

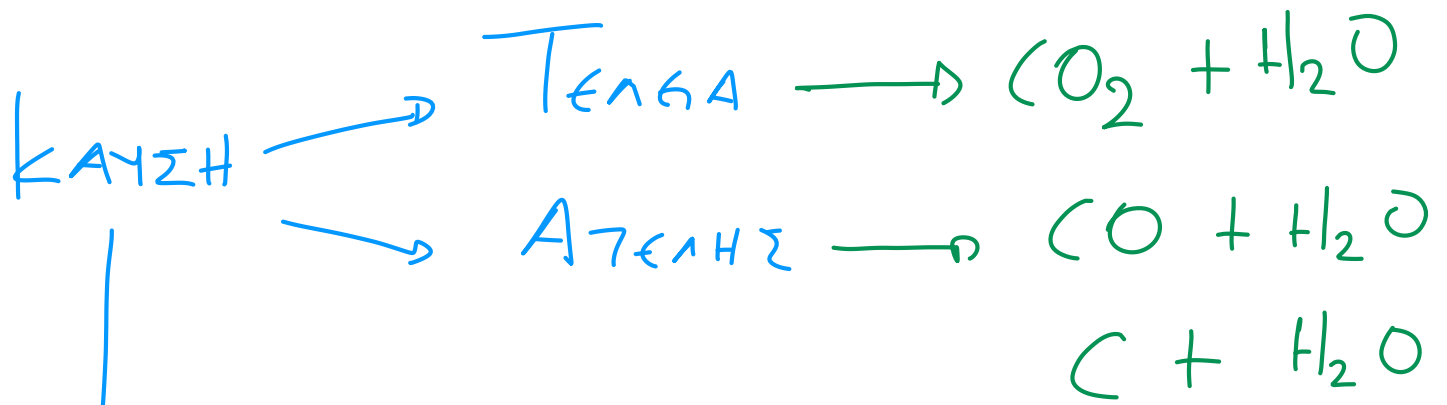
→ ΙΔΙΟ Μ.Τ.

→ Διαφορετική θέση
η χάρ. ομμάδα

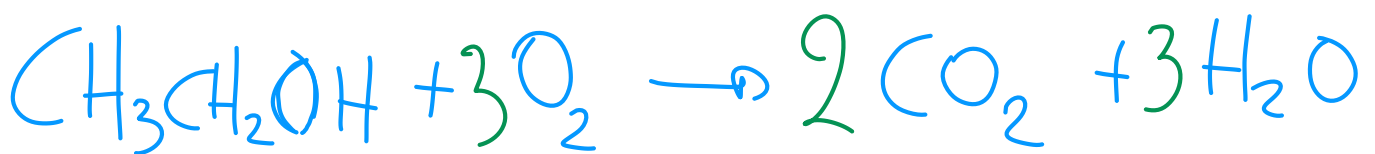
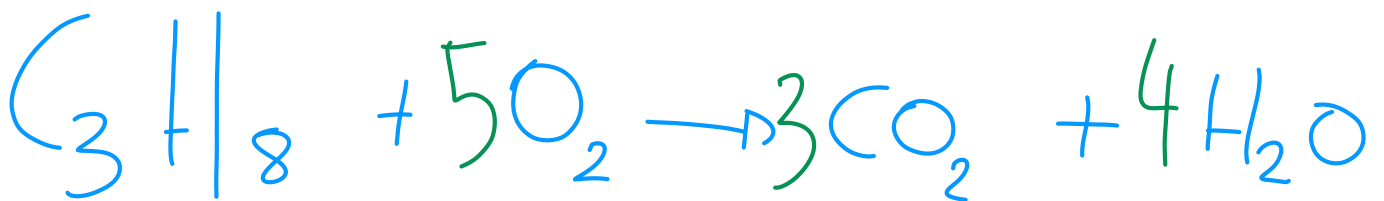
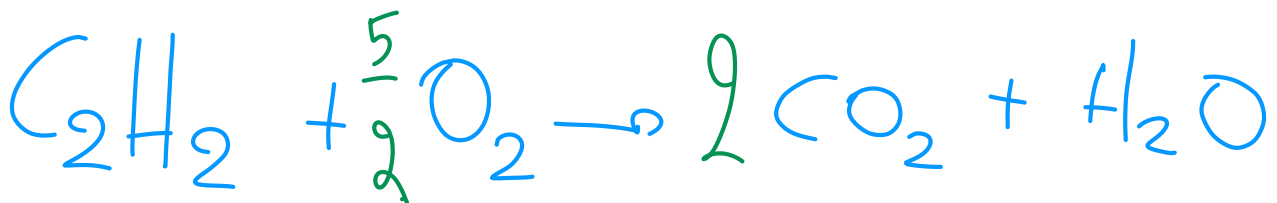
→ ΙΔΙΟ Μ.Τ.

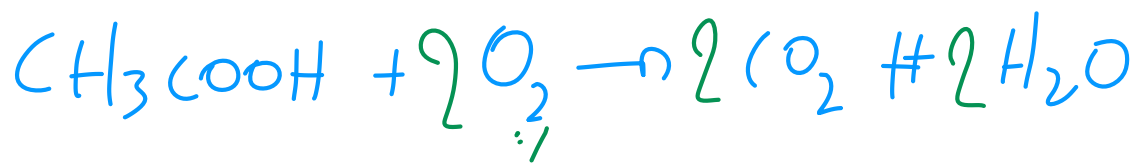


ΚΑΥΣΗ



$\downarrow$
Αντίδραση
με O_2 .





ΒΑΣΙΚΟΙ ΤΥΠΟΙ

mol (n) 10 g CaCO_3

$$n = \frac{m}{M_r}$$

$$n = \frac{10}{100} = 0,1 \text{ mol}$$

Ar Ca: 40

Ar C: 12

Ar O: 16

$$M_r = 1 \cdot 40 + 1 \cdot 12 + 3 \cdot 16$$

$$M_r = 40 + 12 + 48$$

$$M_r = 100$$

STP ΣΥΝΘΗΚΕΣ

$$P = 1 \text{ atm}$$

$$T = 0^\circ\text{C} \text{ ή } 273 \text{ K}$$

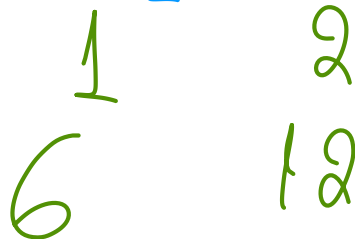
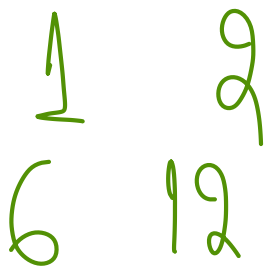
$$n_{\text{STP}} = \frac{V_{\text{αέP}}}{22,4}$$

1 mol αερίων έχn $V = 22,4 \text{ L}$

↓
ΓΡΑΜΜΟΜΟΛΙΚΟ
ΌΓΚΟΣ

8,96 L F_2
6 € STP

$$n_{\text{F}_2} = \frac{V}{22,4} \Rightarrow n = \frac{8,96}{22,4} = 0,4 \text{ mol}$$



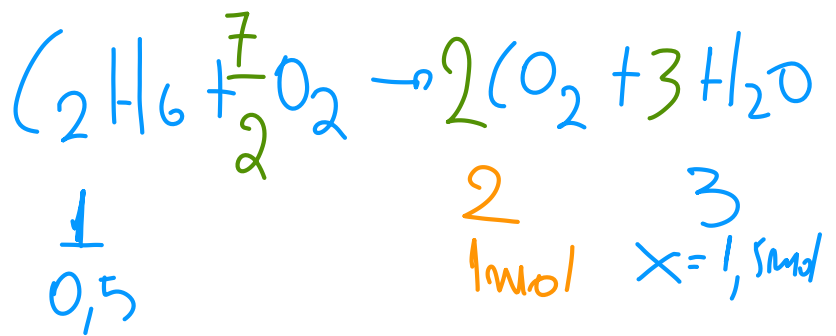
Η αναλογία των 6 $\sqrt{\text{τετετετε}}$ είναι αναλογία
mol

15 g C_2H_6 καίγεται πλήρως.

Να υπολογιστεί

i) m_{H_2O}

ii) V_{CO_2} σε STP

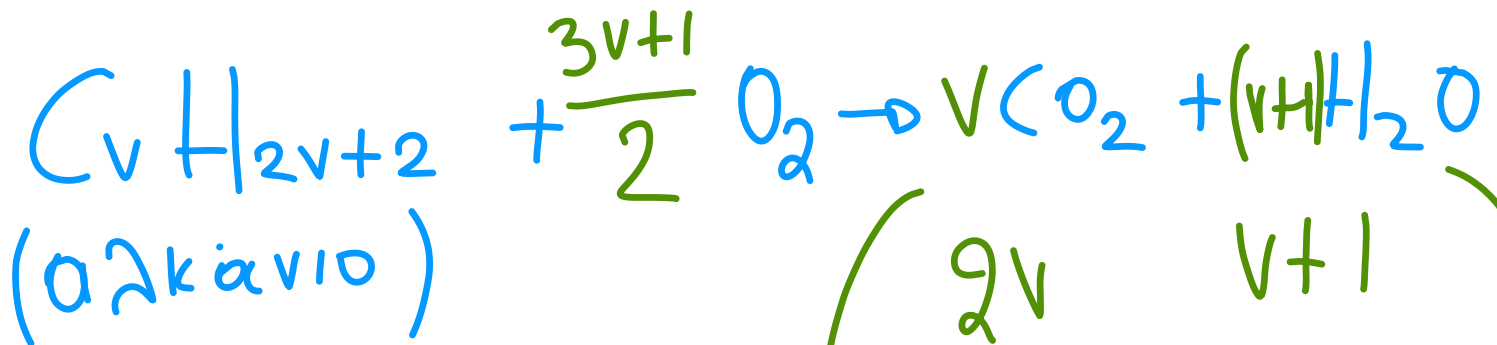


$$M_{C_2H_6} = \frac{m}{M_r} \Rightarrow m_{C_2H_6} = \frac{15}{30} = 0,5 \text{ mol}$$

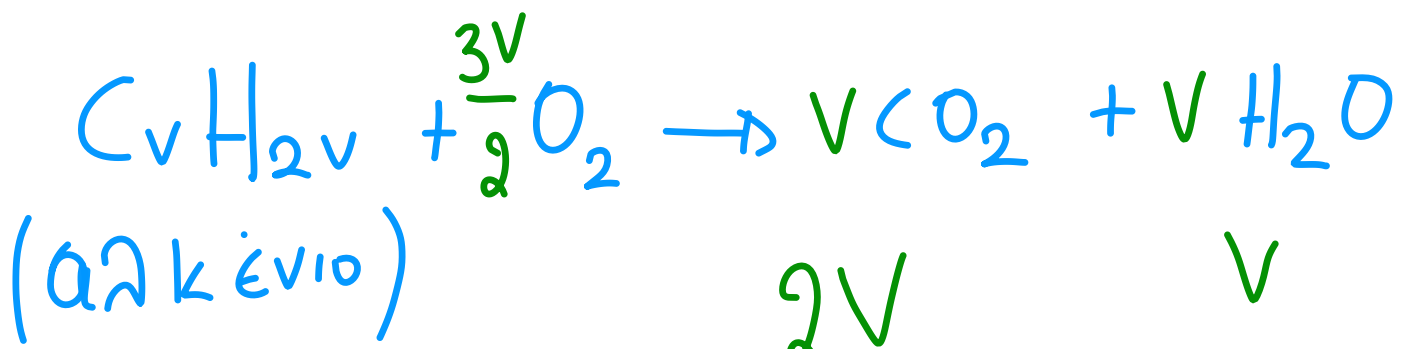
$$n_{H_2O} = \frac{m}{M_r} \Rightarrow m = 0,5 \cdot 18 = 9 \text{ g}$$

$$M_{CO_2} = \frac{V}{22,4} \Rightarrow V = M_{CO_2} \cdot 22,4 \\ V = 1 \cdot 22,4 \Rightarrow V = 22,4 \text{ l}$$

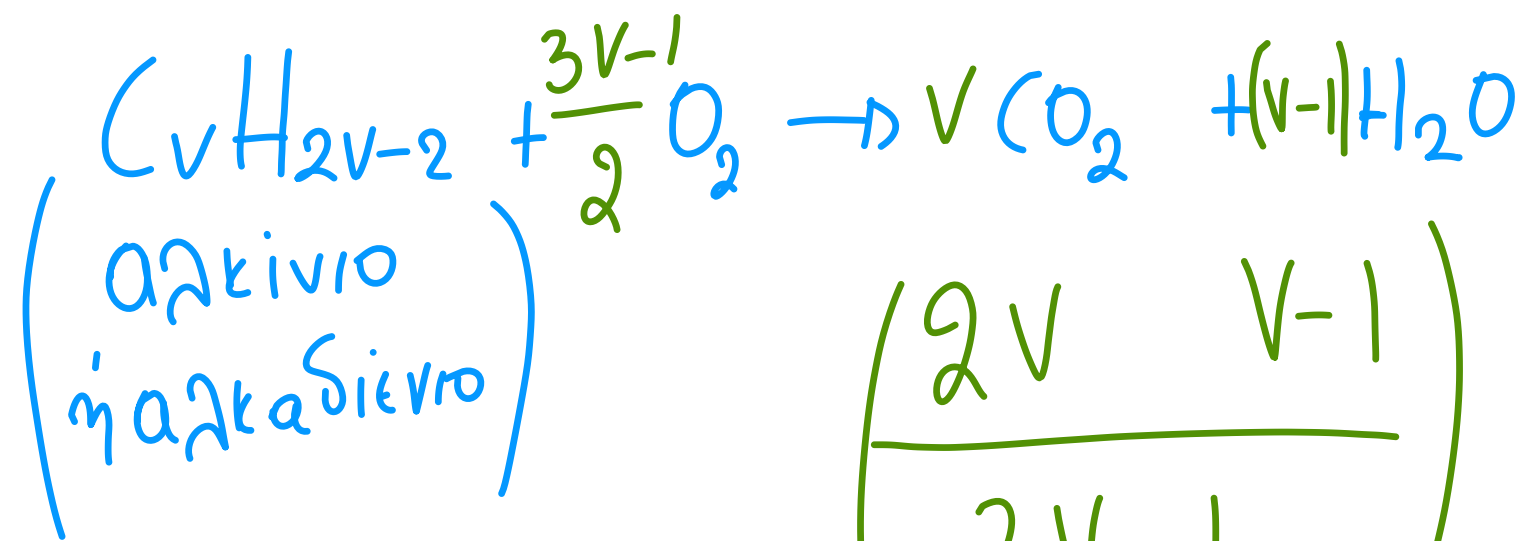
ΚΑΥΣΗ ΜΕ Γ.Μ.Τ.



$$\left(\begin{array}{cc} 2v & v+1 \\ \hline 3v+1 & \text{οξυγόνα} \end{array} \right)$$



$$\frac{2v \quad v}{3v \text{ οξυγόνο}}$$



$$\left(\frac{2v \quad v-1}{3v-1} \right)$$

€ΦΑΡΜΟΒΗ

$$28 \quad C_v H_{2v}$$

$$Ar(C) = 12$$

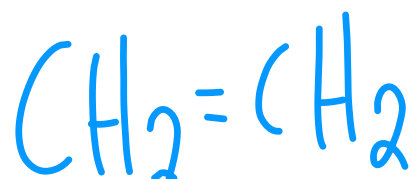
$$Ar(H) = 1$$

$$Mr(C_v H_{2v}) = 12v + 2v$$

$$Mr(C_v H_{2v}) = 14v$$

$$14v = 28 \quad C_2 H_4$$

$$V=2$$



$$0,75$$

$$1,5$$

$$1,5$$

$$n_{C_2 H_4} = \frac{m}{Mr} = n$$

$$m = 0,75 \cdot 28$$

$$m = 21g$$

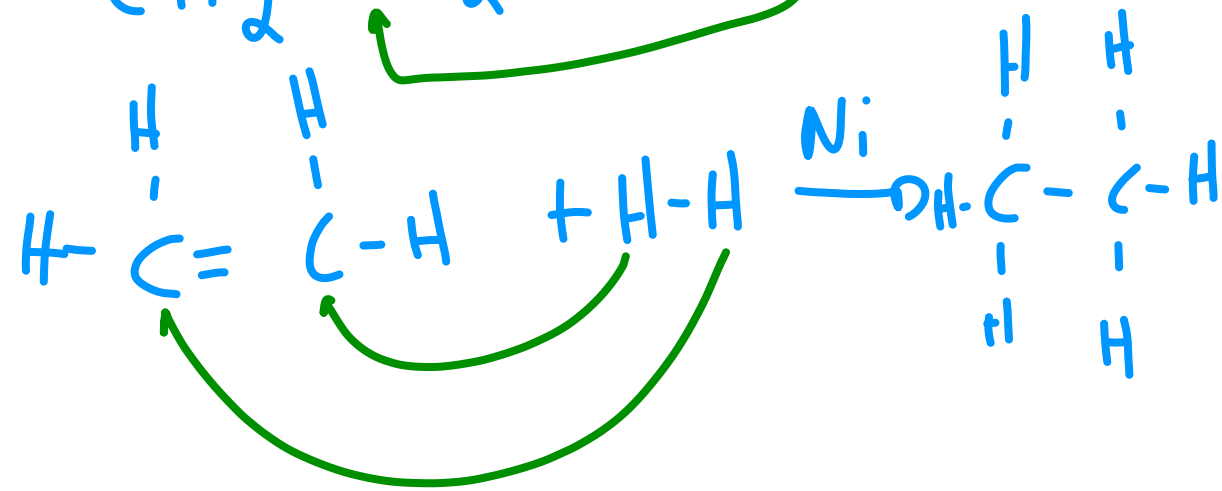
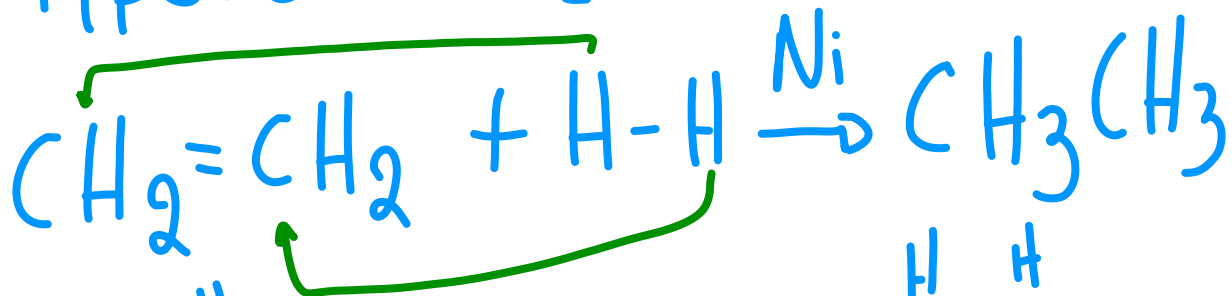
$$n_{CO_2} = \frac{m}{Mr} = \frac{66}{44}$$

$$n_{CO_2} = 1,5 \text{ mol}$$

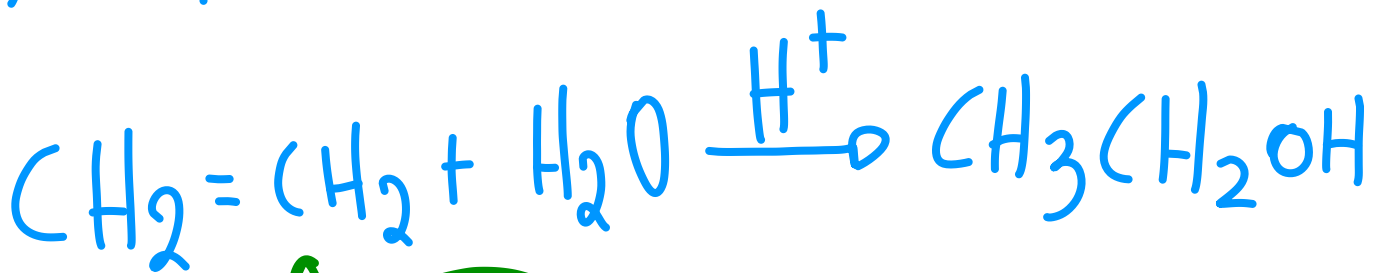
ΑΛΚΕΝΙΑ

$C_n H_{2n} \quad n \geq 2$ (1 διπλό δεσμό)

1) Προσθήκη H_2

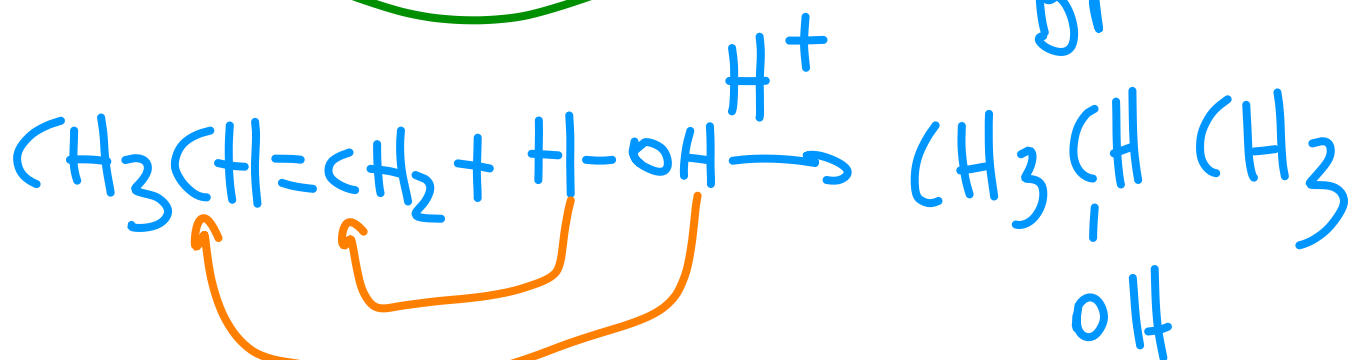
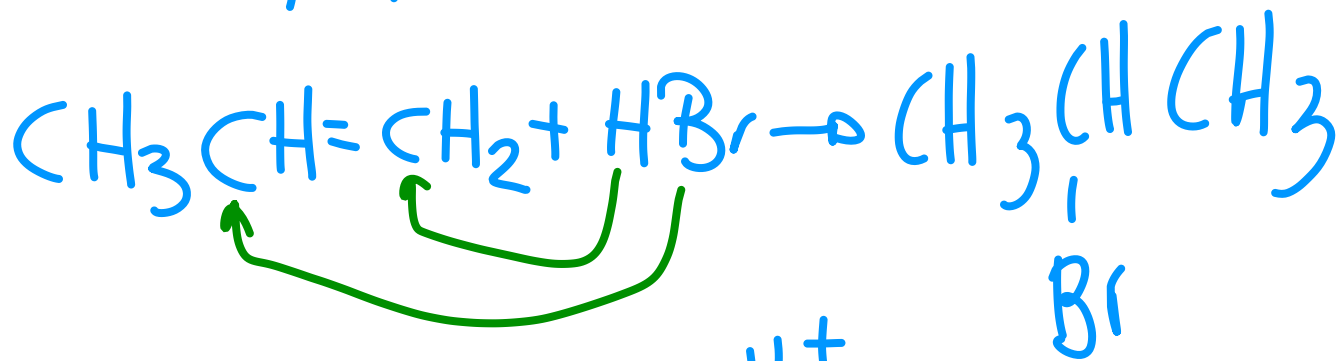
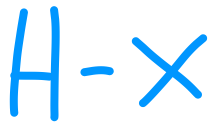


2) Προσθήκη H_2O



αιθανόλη
(οινόπνευμα)

3) Προσθήκη ΥΔΡΑΛΟΓΟΝΟΥ



2 προπανόλη

4) Προσθήκη Αλκοόλου

